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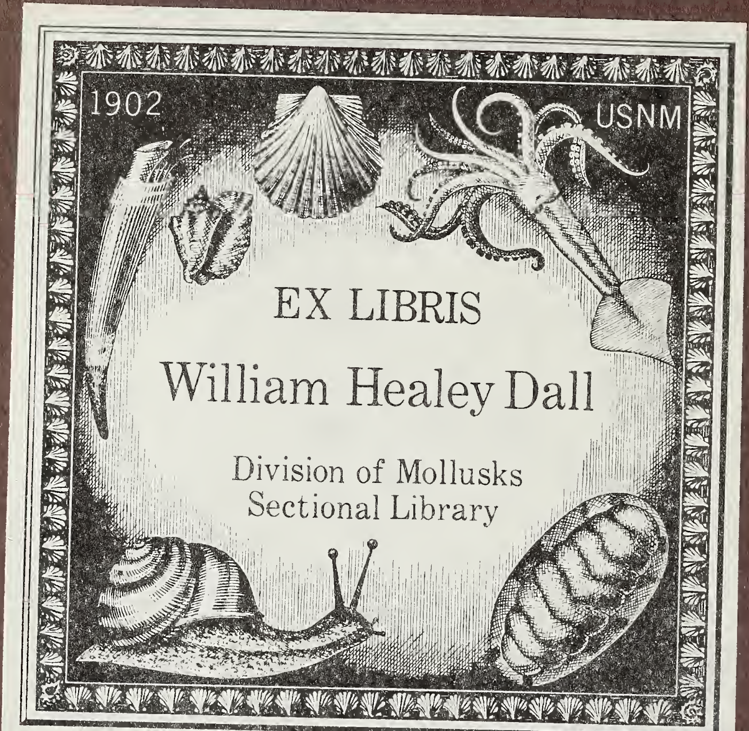

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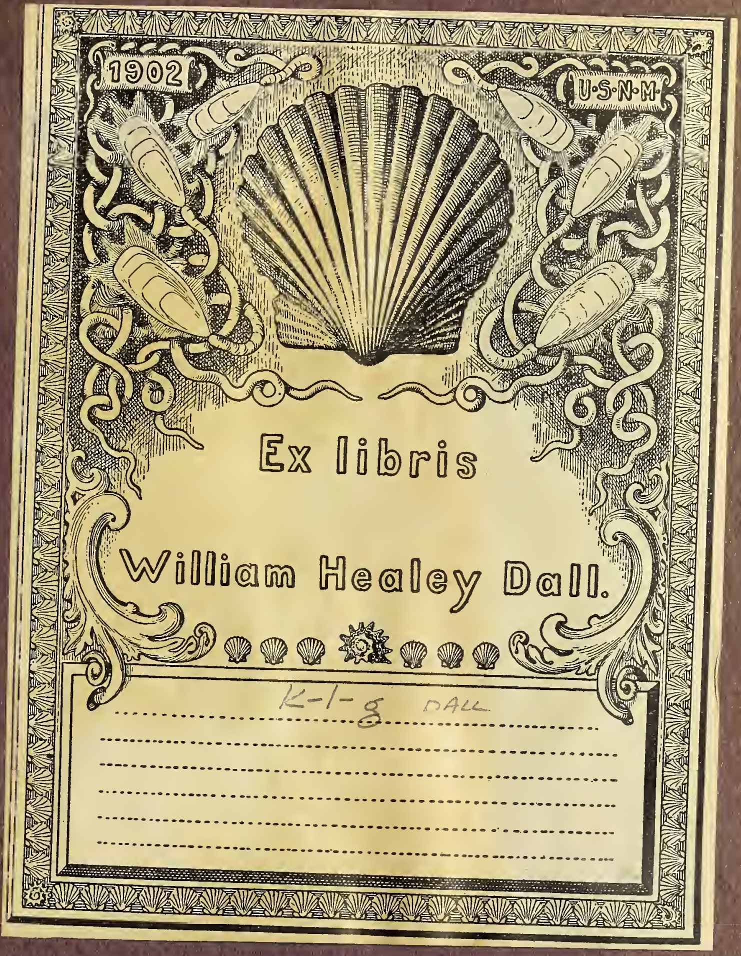

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SMITHSONIAN INSTITUTION
UNITED STATES NATIONAL MUSEUM
Bulletin 112

SUMMARY OF THE MARINE SHELLBEARING MOLLUSKS OF THE NORTHWEST COAST OF AMERICA, FROM SAN DIEGO, CALIFORNIA, TO THE POLAR SEA, MOSTLY CONTAINED IN THE COLLECTION OF THE UNITED STATES NATIONAL MUSEUM, WITH ILLUSTRATIONS OF HITHERTO UNFIGURED SPECIES

BY

WILLIAM HEALEY DALL
Honorary Curator of Mollusks, United States National Museum

WASHINGTON
GOVERNMENT PRINTING OFFICE
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UNITED STATES NATIONAL MUSEUM
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FROM
DR. W. H. DALL
SMITHSONIAN INST.

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ADVERTISEMENT.

The scientific publications of the United States National Museum consist of two series, the *Proceedings* and the *Bulletins.*

The *Proceedings*, the first volume of which was issued in 1878, are intended primarily as a medium for the publication of original, and usually brief, papers based on the collections of the National Museum, presenting newly acquired facts in zoology, geology, and anthropology, including descriptions of new forms of animals, and revisions of limited groups. One or two volumes are issued annually and distributed to libraries and scientific organizations. A limited number of copies of each paper in pamphlet form, is distributed to specialists and other interested in the different subjects as soon as printed. The date of publication is printed on each paper, and these dates are also recorded in the tables of contents of the volumes.

The *Bulletins*, the first of which was issued in 1875, consist of a series of separate publications comprising chiefly monographs of large zoological groups and other general systematic treatises (occasionally in several volumes), faunal works, reports of expeditions, and catalogues of type specimens, special collections, etc. The majority of the volumes are octavos, but a quarto size has been adopted in a few instances in which large plates were regarded as indispensable.

Since 1902 a series of octavo volumes containing papers relating to the botanical collections of the Museum, and known as the *Contributions from the National Herbarium*, has been published as bulletins.

The present work forms No. 112 of the *Bulletin* series.

William de C. Ravenel,
Administrative Assistant to the Secretary,
in charge of the United States National Museum.

Washington, D. C., November 5, 1920.

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SUMMARY OF THE MARINE SHELLBEARING MOLLUSKS OF THE NORTHWEST COAST OF AMERICA, FROM SAN DIEGO, CALIFORNIA, TO THE POLAR SEA, MOSTLY CONTAINED IN THE COLLECTION OF THE UNITED STATES NATIONAL MUSEUM, WITH ILLUSTRATIONS OF HITHERTO UNFIGURED SPECIES.

By William Healey Dall.

Honorary Curator of Mollusks, United States National Museum.

INTRODUCTION.

To the preparation of this summary the author has brought the results of more than 50 years' study of the molluscan fauna of the northwest coast, his personal investigations in the field having begun in 1865, when, under the auspices of the Smithsonian Institution, he visited the shores of the Pacific as a member of the scientific corps of the Western Union Telegraph Expedition.

Since that time a constant inflow of material from that region has enriched the collection of the United States National Museum until it has become unrivaled in this group of animals.

Very few of the species described from the area between the southern boundary of the United States and the Polar Sea on the Pacific coast are absent from the series referred to. In a few cases where the writer has not been able to verify personally the names or the distribution from authentic specimens, the name of the authority upon whom the data rest has been added in parentheses.

The distribution of the Mollusca on the west coast of America may be allotted to three grand divisions: the Arctic or Boreal, the Temperate, and the Tropical faunas.

The first, containing many Circumboreal species, extends from the Arctic or Polar Sea to the southern limit of drift ice in winter in Bering Sea.

The Temperate division extends from this line southward on the west coast of America to Point Conception, California.

The Tropic division extends from this point southward to Point Aguja on the coast of Peru.

Each of these divisions may be subdivided into subordinate and reasonably distinct faunas; the Arctic into Eastern and Western, or

Atlantic and Pacific; the Temperate into Aleutian, Oregonian, and Californian; the Tropic into Gulf of Californian, Panamic, and Ecuadorian. These divisions coincide with differences of temperature of the sea water, generally indicated by the distribution of ocean currents.

Taking the distribution of a single family these distinctions might have their boundaries somewhat modified, but on the average of the whole molluscan fauna they appear to be well established.

The limits of these faunas are not in all cases sharply defined. Some of the less sensitive species will be found to range far beyond the divisional boundaries. In southeastern Alaska, where the inshore channels of the Alexander Archipelago are kept cold by the drainage from glacier streams, many Arctic forms persist; perhaps relicts from the glacial period; while on the outer fringe of the islands quite a number of the more southern species extend their range northward in the warmer ocean waters.

The student of this list will notice many more species, which from southern California extend their range to Panama or even Peru, than are recorded in any previous publication.

There is a special faunula existing on the shallow plateau of northeastern Bering Sea. It is composed largely of carnivorous gastropods, which do not approach the shores. This has furnished a multitude of Buccinidae to the present summary, and was, before the incursion of the whaling fleet, the summer feeding ground of vast numbers of the Pacific walrus.

Before concluding this introduction it would be improper to omit a few words of gratitude to the numerous private students and collectors whose investigations and contributions to the collection have added a multitude of new forms to the known fauna, and to whom a large part of such completeness as this summary may possess is necessarily due. Detailed acknowledgments must await another occasion, but the evidence of their activities is on permanent record in the collections of the United States National Museum, and will afford to future students an indispensable basis for study.

Acknowledgment must also be made to the Director of the United States Geological Survey for the opportunity afforded me to work upon and publish the present paper.

In indicating a figure illustrative of the species standard works, such as are generally accessible in large libraries, have been chosen when possible. If the figure in the work referred to bears there a different specific designation from the one here adopted, it may be understood that the former name is a synonym of the one used in this summary, or for some other reason is not accepted.

Every effort to keep the classification adopted as up to date as possible has been made; though this is a subject on which differences of opinion are to be expected. The International rules of nomenclature have been rigidly followed, in the belief that the progress of science depends largely on standardization of names, however painful it is to note the disappearance of familiar but erroneous designations. The accuracy called for by the present state of the science should not be relaxed to satisfy the protests of amateurs in taxonomy.

In compiling this list I have taken advantage of the work of my colleague, Dr. Paul Bartsch, who has with great care and intense microscopical study worked out the species of minute forms, such as the Pyramidellidae, Rissoidae, Synceratidae, and Caecidae, and have adopted his results as published in the Proceedings of the United States National Museum during the last few years, with only such changes as the progress of science since their publication has made advisable. Many forms which on a superficial examination by the older authors were regarded as mere mutations of a single species have proved on microscopic study to possess constant characters fully entitling them to specific rank. In general, whenever the characters seem to justify it, I have preferred to record separately forms which, on the examination of only a few specimens, might have been regarded as mere mutations. By thus separating them, often from examination of a multitude of individuals, attention is called to their characters, and future students will have an opportunity to exercise their judgment on the question of specific distinction when otherwise it might have been entirely overlooked.

Many of the species with a wide geographical range follow the isotherms, and when collected in the north appear to be denizens of moderate depths, but in the southern part of their range are found only at great depths where the temperature of the water is the same as in their more boreal habitat. It becomes difficult therefore to determine which species are really members of the archibenthal fauna. I have in the following discussion regarded only those found exclusively in depths of over 200 fathoms as belonging to that fauna, and therefore the number of species of that group in the table may seem unduly small, for many of the others also reach great depths in part of their range.

A very few exceptional cases occur where species are known from deep water in the northern part of their range yet have been obtained in moderate depths in the south. Transportation and regurgitation by fishes may account for this anomaly which must await more thorough collection of living specimens for explanation.

In certain cases of anomalous distribution reported by collectors, and when I have not examined personally authentic specimens, I have appended the name of the authority for the locality. A former habit of the Spanish women of southern California, of preparing shell work for sale to tourists and of carrying their baskets of shells (often from Mexican localities) when they went collecting on California beaches, and sometimes spilling a few to be picked up later by other collectors, is responsible for some early records which with better knowledge seem adventitious. The Monterey beaches furnished several records of this kind to Gabb and Cooper, which I have rejected as doubtful. Another source of error arose from the small vessels which used to cruise in the Gulf of California and on the Mexican coast, and which arriving at their home ports in California were beached to scrape off accumulated seaweed, barnacles, etc., containing a certain number of southern mollusks and brachiopods, which, however, never seem to become acclimated. San Diego has furnished some records which may be attributed to this cause. However, eliminating such sources of error, the collections in the United States National Museum upon which this list is primarily based, show a much larger proportion of species ranging from Point Conception to the Gulf of California, Mexico, and Panama than was thought possible by Carpenter and other early students of the West Coast faunas.

In endeavoring to assort according to their respective faunas the species in the following discussion I have met with the difficulty of properly placing a number of species which overlap the limits of one or more faunal districts in their geographic range. In such cases I have tried to assign them to the fauna which seemed to be their natural center of distribution. Probably no two persons would agree exactly with all such decisions, but there seems to be no way to avoid this difficulty.

Excluding the Cephalopoda and Nudibranchiata which I have left for treatment by those more expert in those special groups, and adding a few species which have come to my notice among the bivalves since the publication of my check list of the Pelecypoda, I find the census giving the following results for the region included:

Pelecypoda	496	Gastropoda s. s	1,424
Scaphopoda	19	Polyplacophora	134
Pteropoda	20	Aplacophora	16
Heteropoda	13		
		Total species	2,122

Geographically distributed as follows:

Species introduced with "seed" oysters	6
Pelagic species	28
Exclusively abyssal species	151
Arctic species	148
Species of the Aleutian subfauna	291
Species of the Oregonian fauna	371
Species of the Californian fauna	996
Species of the Panamic fauna	131
Total species	2,122

The latest previous list for the region, that of Carpenter, enumerates 468 species. Of the fauna as now enumerated, 136 forms are common to the Atlantic waters, nearly all belonging to the Arctic seas. There are a few species from the western part of Bering Sea which might more properly be assigned to the Okhotsk or Asiatic fauna, which is generally quite distinct from that of the American shores, but I have thought it best to include them as they may extend to the western Aleutians. The plateau fauna of the shallow part of Bering Sea, which is also in the main distinct from that of the surrounding coasts, has not been segregated from the Aleutian group owing to the fact that thorough collections have not been made, and in the present state of our knowledge it is impossible to be certain how many and which species are exclusively confined to the plateau group, which consists largely of Buccinidae.

The fauna of Kamchatka and the Okhotsk Sea, besides a large number of endemic species, contains many analogues of forms peculiar to the American coast, but specifically distinct from the latter. This is probably due to the chasm of deep water extending from the area between the end of the Aleutian chain and the Russian possessions. This abyss extends northward east of the Commander Islands almost to Bering Strait, heading near the entrance to Plover Bay on the Siberian side. The separation of the two areas has apparently existed long enough for the modification of the American and Okhotsk faunas to specific differences in many originally identical forms.

We find also a certain number of species still persisting in the region of North Japan, the Kuril Islands, and southern Kamchatka, which are also found in the Oregonian and northern California faunas, but not in the Aleutian region between their present habitats. These are probably relics of the time when warmer seas extended to the north and a gradual refrigeration exterminated them in the intervening area. Such a species is *Haliotis kamchatkana.*

The Tertiary and Pleistocene fossils of the shores of Bering Sea also bear evidence of a communication with Atlantic waters during the prevalence of more genial conditions. Several species now living in Bering Sea are found fossil in the late Pliocene of Sankoty Head, Nantucket, and the Pliocene of Iceland, and conversely the common periwinkle of New England, *Littorina palliata* Say, is one of the species found in the elevated beaches of the Nome district, Alaska, and now extinct on the Pacific side. Evidently the intercommunication must have been tolerably free between the two oceans at the time, though now there are quite pronounced differences between the Greenlandic and the Bering Strait Arctic assemblies of mollusks.

A few Mediterranean forms such as *Gibbula adriatica* and *Cymatium corrugatum* appear in the Californian fauna, but no plausible explanation of their presence occurs to me.

Certain discrepancies between the groups of mollusks both in deep and shallow water on the two sides of America were pointed out by me in the discussion of the data in my reports on the dredgings of the *Blake* and *Albatross*. For instance the profusion of species of the Marginellidae in West Indian waters and their scarcity on the Pacific side. Some genera are found only fossil on the Atlantic shores, such as *Strombina*, *Harpa*, and *Cymia*, but are well represented by living forms in the Pacific. Again note the profusion of *Haliotis* on the shores of the Pacific with only a single depauperate deep water species in the western Atlantic. The great number of Pacific *Tritonalia* and other muricoid species contrasts strongly with their paucity on the opposite shores. The late Dr. Philip Carpenter used to lament the absence on the Atlantic coast of the myriads of minute Gastropods he was accustomed to collect on British hunting grounds. That the difference is real, is proved by the scanty rewards which have fallen to New England collectors. But no such scarcity would have been noted had Doctor Carpenter been a west coast collector.

These singularities of distribution will doubtless find an explanation when the recent and fossil mollusk faunas of the two areas are more thoroughly known. At present, hypotheses must be regarded as premature.

A few remarks on the classification adopted may be in order. Of late years some specialists on particular groups, having small knowledge of any but their own particular field, have naturally exaggerated the importance in a classificatory sense of certain features of the subjects of their studies. Two or three bristles in a particular place have sufficed to establish a dipteran genus. This sort of taxonomy does not appeal to me and I have, except in extremely populous groups where convenience requires more laxity, endeavored to exercise a reasonable conservatism in the adoption of divisional names of higher rank than species. I have preferred to utilize the subgeneric names in groups containing numerous species because it familiarizes the student with the subdivisions which in many cases will doubtless reach generic rank at some future time under more intensive study than is at present practicable. Also because of the greater convenience in handling populous groups. In the case of species and varieties, I have preferred inclusiveness to lumping in all cases where doubt existed, but I have not included names based upon mutational color patterns except when the differences are so marked as to be a possible source of misunderstanding to the inexperienced student. In many groups these differences are due to food, or peculiarity of situs, as in *Crepidula*, *Haliotis*, *Acmaea*, and other sessile forms. They are not true species, but further investigation is required to establish the source of their differences. A list of this kind is the basis for improvements, additions, and corrections, and such changes are to be taken as inevitable and welcome. For errors such as are almost impossible to exclude in work depending on such multitudinous and scattered data, those who have undertaken similar work will be most charitable. Naturally the utmost care has been taken to avoid them.

The Pteropods are now known to exist (by the almost miraculous preservation of the characters of the soft parts) in material from the Middle Cambrian collected by Walcott. The absurdity of deriving them from the Opisthobranch forms which first occur in Mesozoic faunas, is so obvious as to require no argument.

That the embryonic form of some Aplacophora possesses temporarily eight dorsal plates, indicates their place as extremely degenerate Chitonoids. It is my opinion that the characters allying the Amphineura to the more evolved forms of Gastropoda have greater taxonomic value than those relied upon to separate the former with the rank of a class, in spite of the different decision arrived at by some much respected authors. I have therefore restricted them to the rank of subclass, assigning ordinal rank to the two groups Polyplacophora and Aplacophora. I am indebted to Prof. Harold Heath's discussion and classification of the west coast Aplacophora for that part of the list.

The material upon which the present list is based is almost exclusively contained in the collection of the United States National Museum and is the result of more than half a century of collecting, beginning with the United States Exploring Expedition material studied by Dr. A. A. Gould. Among the earlier collectors should be named Dr. William Stimpson of the Ringgold and Rodgers exploring expedition; Major William Rich and Colonel Ezekiel Jewett of the Mexican War naturalists; Caleb Kennerly of the Northwestern Boundary Survey; the Rev. Joseph Rowell, an early Californian missionary; William M. Gabb and J. G. Cooper of the Geological Survey of California; Thomas Bridges, William P. Blake, and R. E. C. Stearns. Of those mentioned most of the types of species described by them, or by others from their collections, are preserved in the national collection. Of the collections made on the *Albatross* voyages and by the officers of the United States Revenue Marine and by the United States Bureau of Fisheries, beside my own collections made from 1865 to the end of the nineteenth century while in the service of the Western Union Telegraph Expedition, the United States Coast and Geodetic Survey, and the United States Geological Survey, the types are preserved in the same custody.

The above list refers only to the early collectors who have furnished type specimens to the collection. To the many later private collectors who have wisely and generously contributed material to the United States National Museum I hope to give individual credit in another publication.

There are a few new species on the point of publication which may possibly be delayed until after the issue of this bulletin. I have thought best to include their names, with references to the proposed vehicle of publication, to which the reader may hereafter add the page references when available.

SUMMARY OF SPECIES.

CLASS PELECYPODA.

Order PRIONODESMACEA.

(FOLIOBRANCHIATA)

Superfamily SOLENOMYACEA.

Family SOLEMYACIDAE.

Genus SOLEMYA Lamarck, 1818.

Subgenus Acharax Dall, 1908.

ACHARAX JOHNSONI Dall, 1891.
Proc. U. S. Nat. Mus., vol. 14, p. 189; vol. 17, p. 712, pl. 25, fig. 1.
Oregon to Panama. Ecuador, 1740 fms.

ACHARAX AGASSIZII Dall, 1908.
Bull. Mus. Comp. Zool., vol. 43, p. 365, pl. 16, fig. 10.
Tillamook, Oregon, to Point Aguja, Peru.

Subgenus Petrasma Dall, 1908.

PETRASMA PANAMENSIS Dall, 1908.
Bull. Mus. Comp. Zool., vol. 43, No. 6, p. 366.
Santa Barbara, California, to Panama.

PETRASMA VALVULUS Carpenter, 1864.
Ann. Mag. Nat. Hist., ser. 3, vol. 13, p. 312.
San Pedro, California, to Gulf of California.

Superfamily NUCULACEA.

Family NUCULIDAE.

Genus NUCULA Lamarck, 1799.

NUCULA TENUIS Montagu, 1808.
Test. Brit. Suppl., p. 56, pl. 29, fig. 1.—Hanley, Mon. Nuculidae, pl. 4, figs. 140, 141.
Point Barrow to Coronado Islands. Circumboreal.

NUCULA TENUIS EXPANSA Reeve, 1855.
Last of the Arctic Voy., App., p. 397, pl. 33, fig. 2.
Arctic Ocean to Sitka, Alaska: San Diego?

NUCULA QUIRICA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 394.
Chugachik Bay, Cooks Inlet, Alaska.

NUCULA PETRIOLA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 395.
Off Santa Rosa Island, California, in 53 fathoms.

NUCULA CARDARA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 394.
Monterey, California, to Lower California, in deep water.

NUCULA LINKI Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 394.
Queen Charlotte Sound to Guaymas, Mexico.

NUCULA DARELLA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 394.
Off San Diego, in 822 fathoms.

NUCULA.
Bering Sea, 1,401 fathoms.

NUCULA EXIGUA Sowerby, 1832.
Proc. Zool. Soc., p. 198.—Hanley, Mon. Nuculidae, pl. 4, fig. 136.
Golden Gate to Acapulco. W. coast Patagonia.

NUCULA CARLOTTENSIS Dall, 1897.
Bull. Nat. Hist. Soc. Brit. Col., No. 2, p. 6, pl. 1, figs. 15, 16.
Queen Charlotte Islands to Anacapa Island.

Subgenus ACILA H. and A. Adams, 1858.

ACILA CASTRENSIS Hinds, 1843.
Proc. Zool. Soc., p. 98.—Hanley, Mon. Nuculidae, pl. 5, fig. 148.
Bering Sea to San Diego, California.

Family LEDIDAE.

Genus LEDA Schumacher, 1817.

LEDA TAPHRIA Dall, 1897.
Bull. Nat. Soc. Hist. Brit. Col., No. 2, p. 7, pl. 2, figs. 6, 8.
Bodega Bay, California, to Lower California.

LEDA CELLULITA Dall, 1896.
Nautilus, vol. 10, No. 1, p. 1; Bull. Nat. Hist. Soc. Brit Col., No. 2, p. 7, pl. 2, figs. 5, 7.
Puget Sound.

LEDA ACUTA Conrad, 1831.
Amer. Mar. Conch., p. 32, pl. 6, fig. 1.
Nazan Bay, Atka Island, Aleutians, to Gulf of California. Also Atlantic.

LEDA MINUTA, Fabricius, 1776.
Fauna Grönl., p. 414.—Hanley, Mon. Nuculidae, pl. 3, figs. 61, 62.
Arctic Ocean to San Diego, California. Also Atlantic.

LEDA MINUTA LOMAËNSIS Dall, 1919.
Proc. Biol. Soc., Wash., vol. 32, p. 249.
San Diego, California.

LEDA NAVISA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 395.
Farallones Islands to San Diego, California.

LEDA AMIATA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 395.
Off San Diego, in 488 fathoms.

LEDA PENDERI Dall, 1910.
Canada Gèol. Surv. Mem. 14 N., No. 1143, p. 9, pl. 1, figs. 3, 4.
Queen Charlotte Islands, to Santa Barbara Islands. Forrester Id. Willett.

LEDA BUCCATA Steenstrup, 1842.
Moller, Index Moll. Grönl., p. 17.—Hanley, Mon. Nuculidae, pl. 3, figs. 63, 64.
Arctic Ocean and Bering Strait. Also Atlantic.

LEDA HAMATA Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 98; Proc. U. S. Nat. Mus., vol. 24, No. 1264, p. 558, pl. 40, fig. 9.
Puget Sound to Panama Bay.

LEDA HAMATA LIMATA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 397.
Santa Barbara to San Diego, California.

LEDA OXIA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 395.
Santa Rosa Island, California, to Gulf of California.

LEDA LIOGONA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 396.
Bering Sea in 1,401 fathoms.

LEDA PERNULA Müller, 1779.
Besch. Ges. Naturf. Freunde zu Berlin, vol. 4, p. 55.—Hanley, Mon. Nuculidae, pl. 3, figs. 56, 58.
Arctic Ocean to Plover Bay. Also Atlantic.

LEDA RADIATA Krause, 1885.
Arch. f. Naturg., vol. 51, Heft 1, p. 23, pl. 3, figs. 2 *a–c*.
Arctic Ocean; Plover Bay, Eastern Siberia; Okhotsk and Bering Seas.

LEDA FOSSA Baird, 1863.
Proc. Zool. Soc., p. 71; Bull. Nat. Hist. Soc. Brit. Col., No. 2, p. 7, pl. 2, figs. 3, 13.
Kotzebue Sound, Alaska, to Puget Sound.

LEDA FOSSA SCULPTA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 396.
South of Alaska Peninsula, 69 fathoms.

LEDA FOSSA VAGINATA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 396.
Kasaän Bay, Alaska, 50 fathoms.

LEDA FOSSA CURTULOSA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 396.
Bering Sea and Unalaska.

LEDA PONTONIA Dall, 1889.
Proc. U. S. Nat. Mus., vol. 12, p. 257, pl. 13, fig. 5*b*.
Santa Barbara Islands, California, to Peru and the Galapagos Islands, in deep water.

LEDA LEONINA Dall, 1896.
Nautilus, vol. 10, No. 1, p. 2; Bull. Nat. Hist. Soc. Brit. Col., No. 2, p. 7, pl. 2, fig. 12.
Straits of Fuca to latitude 36° north.

LEDA AMBLIA Dall, 1905.
Nautilus, vol. 18, No. 11, p. 123.
Monterey Bay, California.

LEDA CONCEPTIONIS Dall, 1896.
Nautilus, vol. 10, No. 1, p. 2; Bull. Nat. Hist. Soc. Brit. Col., No. 2, p. 7, pl. 2, fig. 1.
Aleutian Islands to San Diego, California.

LEDA GOMPHOIDEA Dall, ~~1897.~~ 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 396.
Off Tillamook, Oregon, 786 fathoms.

LEDA EXTENUATA Dall, 1897.
Bull. Nat. Hist. Soc. Brit. Col., No. 2, p. 8, pl. 2, fig. 2.
Off Sitka, Alaska, 1,569 fathoms.

LEDA SPARGANA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 397.
Santa Barbara Islands to Point Loma, California.

LEDA FIASCONA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 397.
Off San Diego, California, in 822 fathoms.

LEDA PHENAXIA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 397.
Off San Diego, California, in 822 fathoms.

LEDA DALLI Krause, 1885.
Arch. f. Naturg., vol. 51, p. 27, pl. 3, figs. 1 *a–c*.
Unalaska, Aleutian Islands.

Section **PORTLANDIA** Mörch, 1853.

LEDA GLACIALIS Gray, 1828.
Index Test. Suppl., pl. 2, fig. 6.
Arctic Ocean at Point Barrow. Also Atlantic.

LEDA COLLINSONI Dall, 1919.
Sci. Res. Canadian Arctic Exp., vol. 8, pt. A, p. 19*a*, pl. 2, figs. 3, 4.
Collinson Point, Arctic Coast.

LEDA ARCTICA Gray, 1819.
App. Parry's Voy., p. 241.—HANLEY, Mon Nuculidae, pl. 1, fig. 5.
Point Collinson, Arctic Ocean. Also Atlantic.

Genus YOLDIA Möller, 1842.

Section MEGAYOLDIA Verrill, 1897.

YOLDIA THRACIAEFORMIS Storer, 1838.
Boston Journ. Nat. Hist., vol. 2, p. 122.—Gould, Inv. Mass., p. 97, fig. 66.
Arctic Ocean to Oregon. Also Atlantic.

YOLDIA SECUNDA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 398.
Southeastern Alaska, in deep water.

YOLDIA BERINGIANA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 399.
Bering Sea to Anacapa Island, California.

YOLDIA MONTEREYENSIS Dall, 1893.
Nautilus, vol. 7, No. 3, p. 29; Bull. Nat. Hist. Soc. Brit. Col., No. 2, p. 9, pl. 2, fig. 16.
Chirikoff Island, Alaska, to San Diego, California.

YOLDIA MARTYRIA Dall, 1897.
Bull. Nat. Hist. Soc. Brit. Col., No. 2, p. 9, pl. 2, fig. 15.
Kasaän Bay, Alaska, to Gulf of California.

YOLDIA VANCOUVERENSIS, Smith, 1880.
Ann. Mag. Nat. Hist., ser. 5, vol. 6, No. 34, p. 289.
Vancouver Island (Smith).

Section YOLDIA, s. s.

YOLDIA MYALIS Couthouy, 1838.
Boston Journ. Nat. Hist., vol. 2, p. 62, pl. 3, fig. 7.
Arctic Ocean to Puget Sound. Also Atlantic.

YOLDIA COOPERI Gabb, 1865.
Proc. Cal. Acad. Sci., vol. 3, p. 189; Pal. California, vol. 2, pl. 9, fig. 54.
San Francisco Bay to San Diego, California.

YOLDIA LIMATULA Say, 1831.
Amer. Conch., pl. 12.—Hanley, Mon. Nuculidae, pl. 1, fig. 9.
Arctic Ocean to San Diego. Also Atlantic.

Section CNESTERIUM Dall, 1898.

YOLDIA SCISSURATA Dall, 1898.
Trans. Wagner Inst., vol. 3, pt. 4, p. 595.
Arctic Ocean to Gulf of Georgia.

YOLDIA SEMINUDA Dall, 1871.
Amer. Journ. Conch., vol. 7, p. 153; Bull. Nat. Hist. Soc. Brit. Col., No. 2, p. 8.
Okhotsk and Bering Seas to Sitka, Alaska.

YOLDIA ENSIFERA Dall, 1897.
Bull. Nat. Hist. Soc. Brit. Col., No. 2, p. 9, pl. 2, fig. 4.
Southeastern Alaska to San Luis Obispo, California. Afognak Id, Eyerdam

YOLDIA ENSIFERA PLENA Dall, 1908.
Proc. U. S. Nat. Mus., vol. 34, p. 256.
San Diego, California. 80 fathoms.

Section YOLDIELLA Verrill, 1897.

YOLDIA SILIQUA Reeve, 1855.
Last of the Arctic Voy., vol. 2, p. 396, pl. 33, fig. 3.
Norton Sound, Alaska. Also Atlantic.

YOLDIA INTERMEDIA Sars, 1865.
Fos. Dyre. Quatern. period, p. 38, figs. 92. 96.
Bering Strait and Norton Sound. Circumboreal.

YOLDIA ORCIA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 399.
Tillamook Bay, Oregon, to San Diego.

YOLDIA SANESIA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 399.
Boca de Quadra, Alaska, to Point Conception, California.

YOLDIA OLEACINA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 398.
Arctic Ocean north of Bering Strait.

YOLDIA CAPSA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 400.
Off Tillamook Bay, Oregon, in 786 fathoms.

YOLDIA CECINELLA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 399.
Aleutian Islands to Gulf of California.

Genus PLEURODON Wood, 1840.

Subgenus CYRILLA A. Adams, 1860.

CYRILLA MUNITA (Carpenter) Dall, 1898.
Trans. Wagner Inst., vol. 3, pt. 4, p. 602.
Santa Barbara Islands, to Gulf of California.

Genus MALLETIA Desmoulins, 1832.

MALLETIA TALAMA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 400.
Bering Sea to Oregon.

MALLETIA PACIFICA Dall, 1897.
Bull. Nat. Hist. Soc. Brit. Col., No. 2, p. 11, pl. 2, fig. 11.
Chignik Bay, Alaska, to Monterey, California. Pt. Conception, 278 fms.

MALLETIA FABA Dall, 1897.
Bull. Nat. Hist. Soc. Brit. Col., No. 2, p. 10, pl. 2, fig. 10.
Queen Charlotte Islands, British Columbia, to Lower California.

MALLETIA FIORA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 400.
Off Sitka, Alaska, 1,569 fathoms.

Genus TINDARIA Bellardi, 1875.

TINDARIA CALIFORNICA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 400.
Santa Barbara to San Diego, California.

TINDARIA GIBBSII Dall, 1897.
Bull. Nat. Hist. Soc. Brit. Col., No. 2, p. 10, pl. 2, fig. 14.
Queen Charlotte Islands to Coronado Islands.

TINDARIA DICOFANIA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 401.
Off San Diego, in 822 fathoms.

TINDARIA CERVOLA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 402.
Off San Diego, California, in 822 fathoms.

TINDARIA BRUNNEA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 401.
Bering Sea to Tillamook, Oregon.

TINDARIA MEXICANA Dall, 1908.
Bull. Mus. Comp. Zool., vol. 43, p. 389, pl. 17, figs. 11, 14.
San Diego, California, to Acapulco, Mexico, in deep water.

TINDARIA KENNERLYI Dall, 1897.
Bull. Nat. Hist. Soc. Brit. Col., No. 2, p. 11, pl. 2, fig. 9.
Off Sitka, Alaska, to Santa Barbara Islands, in deep water.

TINDARIA MARTINIANA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 401.
Cape San Martin to Santa Barbara Islands, in deep water.

TINDARIA RITTERI Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 401.
Off La Jolla, California, 293 fathoms.

(FILIBRANCHIATA.)

Superfamily ARCACEA.

Family ARCIDAE.

Genus GLYCYMERIS Da Costa, 1778.

GLYCYMERIS SEPTENTRIONALIS Middendorff, 1849.
Mal. Rossica, vol. 3, p. 67, pl. 21, figs. 1–3.
Aleutian Islands to Forrester Island, Alaska.

GLYCYMERIS SUBOBSOLETA Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 644; Ann. Mag. Nat. Hist., ser. 3, vol. 14, p. 425.
Aleutian Islands to Puget Sound.

GLYCYMERIS CORTEZIANA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 402.
Forrester Island, Alaska, to Cortez Bank, California. San Pedro,

GLYCYMERIS MIGUELIANA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 402.
Cape Blanco, Oregon, to Magdalena Bay, Lower California, and the Cortez Bank. Forrester Id. Willett.

GLYCYMERIS MULTICOSTATA Sowerby, 1832.
Proc. Zool. Soc., p. 195; Conch. Icon., *Pectunculus*, pl. 5, fig. 26.
(?) Monterey, California, to Gulf of California, and Guayaquil.

Genus LIMOPSIS Sasso, 1827.

LIMOPSIS SKENEA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 402.
Bowers Bank, Bering Sea, 30 fathoms.

LIMOPSIS AKUTANICA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 403.
Off Akutan Island, Aleutians, 72 fathoms.

LIMOPSIS DIEGENSIS Dall, 1908.
Bull. Mus. Comp. Zool., vol. 43, p. 395, pl. 15, figs. 13, 15.
Santa Barbara Islands to Coronado Island.

Section EMPLECONIA Dall, 1908.

LIMOPSIS VAGINATUS Dall, 1891.
Proc. U. S. Nat. Mus., vol. 14, p. 190; vol. 17, p. 713, pl. 25, figs. 3, 6, 7.
Bering Sea and Aleutian Islands.

Genus ARCA Linnaeus, 1758.

Subgenus Barbatia Gray, 1847.

Section FOSSULARCA Cossmann, 1887.

BARBATIA SOLIDA Broderip and Sowerby, 1833.
Proc. Zool. Soc., p. 18; Conch. Icon. *Arca*, pl. 16, fig. 106.
San Diego, California, to Panama. San Pedro, Chace.

Section ACAR Gray, 1847.

BARBATIA RETICULATA Gmelin, 1792.
Syst. Nat., vol. 7, p. 3311; Conch. Icon. *Arca*, pl. 16, fig. 108.
San Diego to Ecuador. Also Atlantic.

Subgenus Scapharca Gray, 1847.

SCAPHARCA MULTICOSTATA Sowerby, 1833.
Proc. Zool. Soc., p. 21; Conch. Icon. *Arca*, pl. 4, fig. 23.
San Diego, California, to Gulf of California. Balboa, Tremper

Section BATHYARCA Kobelt, 1891.

SCAPHARCA NUCLEATOR Dall, 1908.
Bull. Mus. Comp. Zool., vol. 43, p. 397, pl. 18, fig. 9.
San Diego, California, to Panama.

Hemphill reports reeviana Manuel lagoon, L. Cal. to Peru.
A specimen of A. reeveana Orb. reported from Balboa
Cal. by Dr. Tremper. A. reticulata, Mtg. Berry, Sta Barbara
Taylor, (+ gradata Brod.)

P. sterna at Scammon's Lagoon. L. Cal. fide Hemphill.

SCAPHARCA (CORPULENTA Smith, 1885, variety ?) POMPHOLYX Dall, 1908.
Bull. Mus. Comp. Zool., vol. 43, p. 398.
Off Santa Barbara, California, to the Galapagos Islands and Mid-Pacific, in deep water.

Superfamily PTERIACEA.

Family PINNIDAE.

Genus ATRINA (Gray) Adams, 1857.

ATRINA OLDROYDI Dall, 1901. **(Plate 2, figs. 4, 5, 6.)**
Nautilus, vol. 24, No. 12, p. 143.
Off San Pedro, California, in 25 fathoms. San Onofre, San Diego [illegible]

Family PTERIIDAE.

Genus PTERIA Scopoli, 1777.

PTERIA VIRIDOZONA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 403.
Long Beach, California (Lowe).

PTERIA STERNA Gould, 1851.
Proc. Boston Soc. Nat. Hist., 1851, p. 93; Mex. and Cal. Shells, p. 31, pl. 16, fig. 7.
San Diego to Panama. Adventitious at S. Diego?

Genus PEDALION Solander, 1770.

PEDALION CHEMNITZIANUM Orbigny, 1845.
Moll. Cuba, vol. 2, p. 346; Conch. Cab., vol. 7, p. 250, pl. 59, fig. 580.
Coronado Islands to Panama and Chile. Also Atlantic.

? Family PHILOBRYIDAE.

Genus PHILOBRYA Carpenter, 1872.

PHILOBRYA SETOSA Carpenter, 1864.
Ann. Mag. Nat. Hist., ser. 3, vol. 13, p. 314; Journ. de Conchyl., vol. 45, p. 10, text figs. 1, 4; pl. 1, fig. 1.
Forrester Island, Alaska, to Gulf of California.

Superfamily OSTRACEA.

Family OSTREIDAE.

Genus OSTREA Linnaeus, 1758.

OSTREA VEATCHII Gabb, 1866.
Pal. Cal., vol. 2, p. 34, pl. 11, fig. 59.
Fossil at San Diego, living in the Gulf of California.

OSTREA PALMULA Carpenter, 1857.
Mazatlan Cat., p. 163.
Puget Sound to Gulf of California.

3/ **OSTREA LURIDA Carpenter, 1864.**
Suppl. Rep. Brit. Assoc., p. 645; Journ. de Conchyl., vol. 12, p. 137.
Sitka to Cape San Lucas.

OSTREA LURIDA EXPANSA Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 646; Journ. de Conchyl., vol. 12, p. 138.
Monterey to San Diego, California.

OSTREA ELONGATA (Solander, 1786, var.) VIRGINICA Gmelin, 1792.
Syst. Nat., vol. 7, p. 3336; Conch. Cab., ed. 1, vol. 8, figs. 677, 678.
Imported from the Atlantic Coast.

Superfamily PECTINACEA.

Genus PECTEN Müller, 1776.

Subgenus PECTEN s. s.

PECTEN DIEGENSIS Dall, 1898.
Trans. Wagner Inst., vol. 3, pt. 4, p. 710.—HINDS, Zool. *Sulphur* Voy. Moll., pl. 17, fig. 6.
Monterey to San Diego and the Cortez Bank.

Subgenus CHLAMYS Bolten, 1798.

CHLAMYS HERICIUS Gould, 1850.
Proc. Boston Soc. Nat. Hist., vol. 3, p. 346.—ARNOLD, Tert. Pectens Cal., pl. 43, figs. 3, 3*a*.
Port Althorp, Alaska, to San Diego, California.

CHLAMYS (HERICIUS Gould, var.?) ALBIDUS Dall, 1906.
ARNOLD, Tert. Pectens Cal., p. 136, pl. 52, fig. 2.
Aleutian Islands.

CHLAMYS HASTATUS Sowerby, 1843.
Thes. Conch. *Pecten*, p. 72, pl. 20, fig. 236.—ARNOLD, Tert. Pectens Cal., pl. 42, figs. 1, 2.
Monterey to San Pedro, California. Puget Sound, Baker.

CHLAMYS HINDSII Carpenter, 1864.
Suppl. Rep. Brit, Assoc., p. 645.—ARNOLD, Tert. Pectens Cal., pl. 43, figs. 1, 2.
Monterey to San Pedro, California.

CHLAMYS HINDSII NAVARCHUS Dall, 1898.
Trans. Wagner Inst., vol. 3, pt. 4, p. 708.—HINDS, Zool. *Sulphur* Voy. Moll., pl. 17, fig. 5.
Bering Sea to San Diego, California.

CHLAMYS HINDSII KINCAIDI Oldroyd, 1920.
Nautilus, vol. 33, p. 135, pl. 4, figs. 3, 4.
Puget Sound.

O. elongata Solander, not of Born, 1780.

Family Pectinidae

Chlamys jordani Arnold, 1903.
Pal. S. Pedro, p. 111, pl. XII, f. 6-7, Pliocene of San Pedro,
Off. S. Juan Id. Wash. in 25-35 fms, Oldroyd.

Arnold, Tert. Pectens Cal. p. 131, pl. 46. figs. 8, 8a, 1906.

CHLAMYS ISLANDICUS Müller, 1776.
Prodr. Zool. Danica, p. 248.—Arnold, Tert. Pectens Cal., p. 113, pl. 45, fig. 1.
Arctic Ocean to Kamchatka and Puget Sound. Also Atlantic.

CHLAMYS ISLANDICUS BERINGIANUS Middendorff, 1849.
Beitr. Mal. Rossica, vol. 3, p. 12.—Arnold, Tert. Pectens Cal., pl. 44, figs. 2–4.
Bering Sea.

CHLAMYS ISLANDICUS PUGETENSIS Oldroyd, 1920.
Nautilus, vol. 33, p. 136, pl. 4, figs. 5, 6.
San Juan Island.

CHLAMYS PAUCICOSTATUS Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 645.—Arnold, Tert. Pectens Cal., pl. 39, figs. 3, 4.
Catalina Island, California, to Gulf of California.

Section PATINOPECTEN Dall, 1898.

CHLAMYS CAURINUS Gould, 1850.
Proc. Boston Soc. Nat. Hist., vol. 3, p. 345.—Arnold, Tert. Pectens Cal., p. 101, pl. 38, 39.
Wrangell, Alaska, to Siletz Bay, Oregon.

Section LEPTOPECTEN Verrill, 1897.

CHLAMYS LATIAURITUS Conrad, 1837.
Journ. Acad. Nat. Sci. Phila., vol. 7, p. 238, pl. 18, fig. 9.
Monterey, California, to Lower California.

CHLAMYS LATIAURITUS MONOTIMERIS Conrad, 1837.
Journ. Acad. Nat. Sci. Phila., vol. 7, p. 238. pl. 18, fig. 10.
Monterey, California, to Gulf of California.

CHLAMYS LATIAURITUS FUCICOLUS Dall, 1898.
Trans. Wagner Inst., vol. 3, pt. 4, p. 710; ~~Zool. Sulphur Voy. Moll., pl. 17.~~
On floating kelp.

CHLAMYS ?TUMBEZENSIS Orbigny, 1846.
Voy. Amer. Mér., p. 663; Thes. Conch. *Pecten*, pl. 12, figs. 18, 19, 26.
Santa Barbara, California, to Peru.

Section PLAGIOCTENIUM Dall, 1898.

CHLAMYS CIRCULARIS Sowerby, 1835.
Proc. Zool. Soc., p. 110; Thes. Conch. *Pecten*, p. 49, pl. 15, figs. 105, 106.—Arnold, Tert. Pectens Cal., pl. 44, fig. 6.
Monterey, California, to Payta, Peru.

CHLAMYS CIRCULARIS AEQUISULCATUS Carpenter, 1865. (1864, Suppl. Rep. 645).
Ann. Mag. Nat. Hist., ser. 3, vol. 15, p. 179.—Arnold, Tert. Pectens Cal., p. 132; pp. 45–46, text figs. 1, 2, pl. 50, fig. 1.
Santa Barbara to Cape San Lucas, Lower California.

Subgenus PSEUDAMUSIUM H. and A. Adams, 1858.

PSEUDAMUSIUM RANDOLPHI Dall, 1897.
Nautilus, vol. 11, No. 8, p. 86; Proc. U. S. Nat. Mus., vol. 24, p. 559, pl. 40, fig. 2.
Bering Sea to Guaymas, Mexico.

PSEUDAMUSIUM TILLAMOOKENSE Arnold, 1906.
Tert. Pectens Cal., p. 139, pl. 48, fig. 3.
Pribiloff Islands, Bering Sea, to San Diego.

PSEUDAMUSIUM VANCOUVERENSE Whiteaves, 1893. (Plate 1, figs. 4, 5.)
Ottawa Nat., vol. 7, p. 133, pl. 1, fig. 1.
Bering Sea to San Diego, California.

PSEUDAMUSIUM DAVIDSONI Dall, 1897.
Nautilus, vol. 11, No. 8, p. 86; Proc. U. S. Nat. Mus., vol. 24, p. 559, pl. 40, figs. 5, 6.
Davidson and Bowers Banks, Bering Sea.

PSEUDAMUSIUM BISTRIATUM Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, p. 404.
Off San Diego, California, in 822 fathoms.

PSEUDAMUSIUM INCONGRUUM Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, p. 403.
Off San Diego, California, in 684 fathoms.

PSEUDAMUSIUM ANDERSONI Dall, 1918.
Sci. Res. Canadian Arctic Exp., vol. 8, pt. A, p. 19*a*, pl. 2, figs. 7, 8.
Dolphin and Union Strait, Arctic Ocean.

Subgenus PROPEAMUSIUM Gregorio, 1883.

PROPEAMUSIUM ALASKENSE Dall, 1871. (Plate 1, fig. 2.)
Amer. Journ. Conch., vol. 7, p. 155, pl. 16, fig. 4.
Pribiloff Islands, Bering Sea, and southward to the Santa Barbara Islands, California. Japan.

Genus HINNITES Defrance, 1821.

HINNITES GIGANTEUS Gray, 1825.
Ann. Phil., ser. 2, vol. 12, p. 103.—ARNOLD, Tert. Pectens Cal., pl. 29, figs. 1, 2.
Aleutian Islands to Magdalena Bay, Lower California.

Family LIMIDAE.

Genus LIMA (Bruguière) Cuvier, 1798.

Subgenus MANTELLUM Bolten, 1798.

MANTELLUM DEHISCENS Conrad, 1837.
Journ. Acad. Nat. Sci. Phila, vol. 7, p. 247, pl. 19, fig. 7.
Monterey, California, to Acapulco, Mexico.

Subgenus LIMATULA S. Wood, 1839.

LIMATULA ATTENUATA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, p. 404.
Southern Bering Sea, the Aleutian Islands and eastward to the Shumagin Islands, Alaska.

LIMATULA SUBAURICULATA Montagu, 1808.
Test. Brit. Suppl., p. 63.—JEFFREYS, Brit. Conch., vol. 5, pl. 25, fig. 3.
British Columbia to San Quentin Bay, Lower California. Also Atlantic.
Afognak Id. Alaska and Drier Bay, Pr. Wm. Sound, Eyerdam.

M. modiolus at San Ignacio lagoon. L. Cal. fide
Eric Jordan on authority of Hemphill. (?)

Superfamily ANOMIACEA.

Family ANOMIIDAE.

Genus ANOMIA Linnaeus, 1758.

ANOMIA PERUVIANA Orbigny, 1846.
Voy. Amer. Mér., p. 673.—Philippi, Abb. u. Beschr., vol. 3, p. 211, pl. 1, fig. 2.
San Pedro, California, to Peru and the Galapagos Islands.

Genus PODODESMUS Philippi, 1837.

Subgenus Monia Gray, 1849.

MONIA MACROSCHISMA Deshayes, 1839.
Revue Zool. Soc. Cuvierienne, p. 359.—Guérin, Mag. de Zool., 1841, pl. 34.
Southern Bering Sea from the Pribilof Islands, to Japan and the Okhotsk Sea on the west, and eastward along the whole coast to Lower California.

Superfamily MYTILACEA.

Family MYTILIDAE.

Genus MYTILUS Linnaeus, 1758.

MYTILUS CALIFORNIANUS Conrad, 1837.
Journ. Acad. Nat. Sci. Phila., vol. 7, p. 242, pl. 18, fig. 15; Conch. Icon. *Mytilus*, pl. 1, fig. 2.
Unalaska, Aleutian Islands, eastward and southward to Socorro Island.

MYTILUS EDULIS Linnaeus, 1758.
Syst. Nat., ed. 10, p. 705.—Gould, Inv. Mass., fig. 82.
Arctic Ocean to Cerros Island, and worldwide in temperate waters.

Section HORMOMYA Mörch, 1853.

MYTILUS ADAMSIANUS Dunker, 1856.
Proc. Zool. Soc., p. 360; Conch. Icon. *Mytilus*, pl. 11, fig. 55.
Santa Barbara, California, to Panama and the Galapagos Islands.

MYTILUS RECURVUS Rafinesque, 1820. = M. clava Meuschen, 1778, Zool. Gron. p. 279 no. 1207.
Ann. Gen. Sci. Phys., vol. 5, p. 320.—Say, Amer. Conch., pt. 5, pl. 50.
Newport, California, introduced with seed oysters from the Atlantic.

Genus SEPTIFER Recluz, 1848.

SEPTIFER BIFURCATUS (Conrad) Reeve, 1837.
Journ. Acad. Nat. Sci. Phila., vol. 7, p. 241, pl. 18, fig. 14.
Crescent City, California, to Gulf of California.

SEPTIFER BIFURCATUS OBSOLETUS Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, p. 404.
San Diego, California.

Genus MODIOLUS Lamarck, 1799.

MODIOLUS MODIOLUS Linnaeus, 1758.
Syst. Nat., ed. 10, p. 706; Conch. Icon., *Modiola*, pl. 1, fig. 2.
Circumboreal. On the Pacific side Arctic and Bering Seas and southward to San Pedro, California, and the outlying islands.

MODIOLUS RECTUS Conrad, 1837.

Journ. Acad. Nat. Sci. Phila., vol. 7, p. 243, pl. 19, fig. 1.

Bolinas Bay, California, to Magdalena Bay, Lower California.

MODIOLUS FLABELLATUS Gould, 1850.

Boston Journ. Nat. Hist., vol. 3, p. 343; Rep. U. S. Expl. Exp. Moll., p. 453, fig. 561.

Vancouver Island to San Diego, California.

MODIOLUS CAPAX Conrad, 1837.

Journ. Acad. Nat. Sci. Phila., vol. 7, p. 242; Conch. Icon. *Modiola*, pl. 3, fig. 11.

Santa Barbara, California, to Payta, Peru.

MODIOLUS FORNICATUS Carpenter, 1864.

Suppl. Rep. Brit. Assoc., p. 643; Ann. Mag. Nat. Hist., ser. 3, vol. 15, p. 178.

Trinidad to San Pedro and Cortez Bank, California.

MODIOLUS (POLITUS Verrill, 1880, var.?) **PALLIDULUS** Dall, 1916.

Proc. U. S. Nat. Mus., vol. 52, p. 404.

Off Bodega Head, California, and south to Cerros Island, Lower California, in deep water.

Subgenus GREGARIELLA Monterosato, 1883.

GREGARIELLA OPIFEX Say, 1825. = G. coralliophaga Gmelin, 1792.

Journ. Acad. Nat. Sci. Phila., vol. 4, p. 369. pl. 19, fig. 2.

Santa Barbara, California, to Gulf of California.

Subgenus BRACHYDONTES Swainson, 1840.

BRACHYDONTES DEMISSUS Dillwyn, 1817.

Descr. Cat. Rec. Shells, vol, 1, p. 314; Journ. Acad. Nat. Sci. Phila., vol. 7, pl. 20, fig. 7.

Imported with "seed" oysters from the Atlantic coast. San Francisco Bay, on oyster beds.

Genus BOTULA Mörch, 1853.

Subgenus ADULA H. and A. Adams, 1857.

ADULA DIEGENSIS Dall, 1911. (Plate 1, figs. 1, 3.)

Nautilus, vol. 24, No. 10, p. 110; vol. 30, No. 1, p. 2.

San Francisco Bay to Cape San Lucas.

ADULA FALCATA Gould, 1851.

Proc. Boston Soc. Nat. Hist., vol. 4, p. 92; Mex. and Cal. Shells, pl. 6, fig. 9.

Coos Bay, Oregon, to San Diego, California.

ADULA CALIFORNIENSIS Philippi, 1847.

Zeitschr. Mal., p. 113; Conch. Cab., ed. 2, *Lithophaga*, pl. 5, fig. 19.

Vancouver Island to San Diego, California. North Japan.

Genus DACRYDIUM Torell, 1859.

DACRYDIUM PACIFICUM Dall, 1916.

Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 405.

Bering Sea, 1401 fathoms.

Insert: M. laevigata Gray, 1824. Circumboreal. Arctic Ocean to Puget Sound.

Genus LITHOPHAGA Bolten, 1798.

Section DIBERUS Dall, 1898.

LITHOPHAGA PLUMULA Hanley, 1844.
Proc. Zool. Soc., p. 17; Descr. Cat., p. 239, pl. 24, fig. 23.
Monterey, California, to Patagonia. Also Atlantic.

Section LABIS Dall, 1916.

LITHOPHAGA ATTENUATA Deshayes, 1836.
Anim. s. Vert., ed. 2, vol. 7, p. 28.—Philippi, Abb. u. Beschr., vol. 2, p. 148, pl. 1, fig. 6.
Monterey to Patagonia.

Section MYOFORCEPS Fischer, 1886.

LITHOPHAGA ARISTATA Dillwyn, 1817.
Descr. Cat. Rec. Shells, vol. 1, p. 303.—Wood, Index Test., pl. 12, fig. 8, 1825.
La Jolla, San Diego County, California, to Peru. Also Atlantic.

Genus MUSCULUS Bolten, 1798. not Martyn, 1787.

= Modiolaria Beck, 1840.

MUSCULUS NIGER Gray, 1824.
App. Parry's Voy., p. 244; Voy. de la *Recherche*, pl. 17, fig. 1.
Circumboreal. Arctic Ocean to Oregon.

MUSCULUS NIGER OBESUS Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, p. 405.
Arctic Ocean to Cape Flattery.

MUSCULUS PROTRACTUS Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, p. 405.
Nunivak Island, Bering Sea, to Monterey.

MUSCULUS OLIVACEUS Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, p. 405.
Bering Sea to Catalina Island, California.

MUSCULUS IMPRESSUS Dall, 1907. (Plate 3, figs. 6, 7.)
Smithsonian Misc. Coll., vol. 50, No. 1727, p. 172.
Petrel Bank, Bering Sea.

MUSCULUS TAYLORI Dall, 1897.
Bull. Nat. Hist. Soc. Brit. Col., No. 2, p. 5, pl. 1, figs. 17, 18.
Victoria, Vancouver Island.

MUSCULUS SUBSTRIATUS Gray, 1824.
App. Parry's Voy., p. 245; Voy. de la *Recherche*, pl. 17, fig. 3.
Circumboreal. Arctic Ocean to Puget Sound.

MUSCULUS CORRUGATUS Stimpson, 1851.
Shells of N. Engl., p. 12.—Gould, Inv. Mass., p. 130, fig. 84.
Circumboreal. Arctic Ocean to Puget Sound.

MUSCULUS VERNICOSUS Middendorff, 1849.
Mal. Rossica, vol. 3, p. 20, pl. 11, figs. 25–27.
Bering Sea to Sitka. Also Okhotsk Sea.

MUSCULUS PHENAX Dall, 1915.
Nautilus, vol. 28, No. 12, p. 138.
St. George Island, Bering Sea.

MUSCULUS MARMORATUS Forbes, 1838.
Malac. Monensis, p. 44.—Forbes and Hanley, Brit. Moll., pl. 45, fig. 4.
Circumboreal? "Puget Sound" (P. P. C.)

MUSCULUS SEMINUDUS Dall, 1897.
Bull. Nat. Hist. Soc. Brit. Col., No. 2, p. 5, pl. 1, fig. 1.
Bering Sea to Forrester Island, Alaska.

Genus CRENELLA Brown, 1827.

CRENELLA DECUSSATA Montagu, 1808.
Test. Brit. Suppl., p. 69.—Forbes and Hanley, Brit. Moll., vol. 2, p. 210, pl. 45, fig. 2.
Bering Sea to the Santa Barbara Islands, California. Also Atlantic.

CRENELLA LEANA Dall, 1897.
Bull. Nat. Hist. Soc. Brit. Col., No. 2, p. 4, pl. 1, figs. 6, 7.
Aleutian Islands, eastward to Middleton Island, Alaska.

CRENELLA COLUMBIANA Dall, 1897.
Bull. Nat. Hist. Soc. Brit. Col., No. 2, p. 4, pl. 1, figs. 3, 5.
Aleutian Islands to San Diego, California.

CRENELLA DIVARICATA Orbigny, 1845.
Moll Cuba, vol. 2, p. 311, pl. 27, figs. 56–59.
Santa Barbara Islands to Panama Bay. Also West Indies.

CRENELLA GRISEA Dall, 1897.
Smithsonian Misc. Coll., vol. 50, No. 1727, p. 171.
Bering Sea to Sitka, Alaska.

CRENELLA ROTUNDATA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 406.
Santa Cruz Island, California, in 155 fathoms.

Order ANOMALODESMACEA.

A: ENSIPHONIA.

Family PERIPLOMATIDAE.

Genus PERIPLOMA Schumacher, 1817.

PERIPLOMA PLANIUSCULA Sowerby, 1834.
Proc. Zool. Soc., p. 87; Journ. Acad. Nat. Sci. Phila., vol. 7, pl. 18, fig. 8.
San Pedro, California, to Guayaquil.

PERIPLOMA DISCUS Stearns, 1890.
Proc. U. S. Nat. Mus., vol. 13, p. 222, pl. 16, figs. 1, 2.
San Pedro Bay, California, to San Diego.

Clover Pass, Behm Canal, 30 fms. Willett.

San Hippolito Pt. L. Cal. Hemphill coll.

Section HALISTREPTA Dall, 1904.

PERIPLOMA SULCATA Dall, 1904.

Nautilus, vol. 17, No. 11, p. 122; Bull. Mus. Comp. Zool., vol. 43, No. 5, pl. 15, fig. 10.

San Pedro Bay, Terminal Island, California.

Family THRACIIDAE.

Genus THRACIA (Leach) Blainville, 1824.

THRACIA CURTA Conrad, 1837.

Journ. Acad. Nat. Sci. Phila., vol. 7, p. 248, pl. 19, fig. 8.

Arctic Ocean, Bering Sea, and south to San Diego, California.

THRACIA BERINGI Dall, 1915.

Proc. U. S. Nat. Mus., vol. 49, No. 2116, p. 442.

Bering Sea, Aleutian Islands and southward to Sitka, Alaska.

THRACIA CHALLISIANA Dall, 1915.

Proc. U. S. Nat. Mus., vol. 49, No. 2116, p. 443.

Forrester Island, Alaska, to Gulf of Georgia.

THRACIA DIEGENSIS Dall, 1915.

Proc. U. S. Nat. Mus., vol. 49, No. 2116, p. 443.

San Pedro Bay, California, to Magdalena Bay.

Genus CYATHODONTA Conrad, 1849.

CYATHODONTA DUBIOSA Dall, 1915.

Proc. U. S. Nat. Mus., vol. 49, No. 2116, p. 445.

San Pedro to San Diego and the Gulf of California.

CYATHODONTA PEDROANA Dall, 191~~6~~. 5/

Proc. U. S. Nat. Mus., vol. 49, No. 2116, p. 445.

San Pedro Harbor and Catalina Island, California.

Genus ASTHENOTHAERUS Carpenter, 1864.

ASTHENOTHAERUS VILLOSIOR Carpenter, 1864.

Ann. Mag. Nat. Hist., ser. 3 vol. 13, p. 311.

San Pedro, California, to Cape San Lucas.

B: ADELOSIPHONIA.

Family PANDORIDAE.

Genus PANDORA Hwass, 1795.

Subgenus KENNERLIA Carpenter, 1864.

KENNERLIA GRANDIS Dall, 1877.

Proc. Cal. Acad. Sci., vol. 7, p. 11.

Pribilof Islands, Bering Sea, to Siletz Bay, Oregon.

KENNERLIA GLACIALIS Leach, 1819.
Journ. de Phys., vol. 88, p. 465.—Sowerby, Spec. Conch., figs. 4–6.
Arctic Ocean and south to Fuca Straits. Also Atlantic.

KENNERLIA GLACIALIS EUTAENIA Dall, 1915.
Proc. U. S. Nat. Mus., vol. 49, No. 2116, p. 449.
Port Etches, Alaska.

KENNERLIA FILOSA Carpenter, 1864.
Proc. Zool. Soc., p. 602.—Arnold, Pal. San Pedro, pl. 18, fig. 3.
Nunivak Island, Bering Sea, to San Pedro, California.

KENNERLIA BILIRATA Conrad, 1855.
Proc. Acad. Nat. Sci., Phila., p. 267; Pacific R. R. Reps., vol. 6, p. 73, pl. 5, fig. 25.
Forrester Island, Alaska, south to Point Abreojos, Lower California.

KENNERLIA GRANULATA Dall, 1915.
Proc. U. S. Nat. Mus.. vol. 49, No. 2116, p. 449.
Santa Barbara, California, to Gulf of California.

KENNERLIA FORRESTERENSIS Willett, 1918.
Nautilus, vol. 31, No. 4, p. 134.
Forrester Island, Alaska, 50 fathoms.

Subgenus HETEROCLIDUS Dall, 1915.

HETEROCLIDUS PUNCTATUS Conrad, 1837 (not Carpenter, 1864).
Journ. Acad. Nat. Sci., Phila., vol. 7, p. 228, pl. 17, fig. 1.
Vancouver Island to Gulf of California.

Family LYONSIIDAE.

Genus LYONSIA Turton, 1822.

LYONSIA STRIATA Montagu, 1815.
Trans. Linn. Soc., vol. 11, p. 188, pl. 13, fig. 1 *A*.—Turton, Dithyra Brit. pl. 3, figs. 6, 7.
Circumboreal. Aleutian Islands to Fuca Straits.

LYONSIA ARENOSA Moller, 1842.
Index Moll. Grönl., p. 20; Zool. Beechey's Voy., pl. 43, fig. 3.
Circumboreal. Arctic Sea to Japan and the Okhotsk Sea on the west and on the east to the Aleutians and Kodiak Island, Alaska.

LYONSIA GOULDII Dall, 1915.
Proc. U. S. Nat. Mus., vol. 49, p. 453.—Gould, Mex. and Cal. Shells, pl. 15, fig. 6.
San Francisco Bay, California, and south to Point Abreojos, Lower California.

LYONSIA CALIFORNICA Conrad, 1837.
Journ. Acad. Nat. Sci. Phila., vol. 7, p. 248, pl. 19, fig. 20.
Puget Sound to Todos Santos Bay, Lower California.

LYONSIA CALIFORNICA HAROLDI Dall, 1915.
Proc. U. S. Nat. Mus., vol. 49, p. 453.
Central California.

Prince William Sound, at Knight Id. Eyerdam.

Manuel Lagoon, L. Cal. Hemphill coll.

Round Island, L. Cal. Hemphill coll.

LYONSIA (CALIFORNICA var.?) NESIOTES Dall, 1915.
Proc. U. S. Nat. Mus., vol. 49, p. 453.
Catalina and Coronado Islands, to Magdalena Bay.

LYONSIA PUGETENSIS Dall, 1913.
Proc. U. S. Nat. Mus., vol. 45, p. 595.
Chignik Bay, Alaska, to Puget Sound.

Subgenus ALLOGRAMMA Dall, 1903.

ALLOGRAMMA AMABILIS Dall, 1913.
Proc. U. S. Nat. Mus., vol. 45, p. 594.
Off Santa Barbara Channel, California, 534 fathoms.

Subgenus ENTODESMA Philippi, 1845.

ENTODESMA INFLATUM Conrad, 1837.
Journ. Acad. Nat. Sci. Phila., vol. 7, p. 248, pl. 19, fig. 10.
In sponges, Vancouver Island to Guayaquil. Forrester Id. Willett.

Section AGRIODESMA Dall, 1900.

ENTODESMA SAXICOLA Baird, 1863.
Proc. Zool. Soc., p. 70: Proc. U. S. Nat. Mus., vol. 49, p. 456.
Aleutian Islands to Cape Colnette, Lower California.

ENTODESMA SCAMMONI Dall, 1871.
Amer. Journ. Conch., vol. 7, p. 142, pl. 16, fig. 3.
Port Simpson, British Columbia (Scammon). San Diego (Orcutt).

Genus MYTILIMERIA Conrad, 1837.

MYTILIMERIA NUTTALLII Conrad, 1837.
Journ. Acad. Nat. Sci. Phila., vol. 7, p. 246, pl. 19, fig. 5.
In compound Ascidians. Vancouver Island to San Diego, California. Forrester Id. Willett.

Superfamily POROMYACEA.

Family POROMYACIDAE.

Genus POROMYA Forbes, 1844.

Subgenus DERMATOMYA Dall, 1908.

DERMATOMYA TENUICONCHA Dall, 1913. (Plate 3, fig. 10.)
Proc. U. S. Nat. Mus., vol. 45, No. 2002, p. 596.
Alaska Peninsula to Coronado Islands, in deep water.

DERMATOMYA BUTTONI Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 406.
Monterey, California (Button).

DERMATOMYA BERINGIANA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 406.
Aleutian Islands to Tillamook, Oregon.

DERMATOMYA LEONINA Dall, 1916. **(Plate 2, fig. 2.)**
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 406.
Off coast of Washington, 877 fathoms.

Genus CETOCONCHA Dall, 1886.

CETOCONCHA MALESPINAE Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 407.
Southwest of Sitka, Alaska, 1,579 fathoms.

(?) Family LYONSIELLIDAE.

Genus LYONSIELLA M. Sars, 1872.

LYONSIELLA ALASKANA Dall, 1894.
Proc. U. S. Nat. Mus., vol. 17, p. 703, pl. 25, fig. 2.
Southwest of Sitka, 1,659 fathoms, and off Catalina Island, California, in 600 fathoms.

Family CUSPIDARIIDAE.

Genus CUSPIDARIA Nardo, 1840.

CUSPIDARIA GLACIALIS G. O. Sars, 1878.
Moll. Reg. Arct. Norv., p. 88, pl. 6, figs. 8*a*, 8*c*.
Off San Diego, California, 239 fathoms. Also Atlantic.

CUSPIDARIA SUBGLACIALIS Dall, 1913. **(Plate 3, fig. 4.)**
Proc. U. S. Nat. Mus., vol. 45, No. 2002, p. 593.
Off California coast, in deep water.

CUSPIDARIA APODEMA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 407.
Off Sitka, Alaska, and south to Panama Bay, in deep water.

CUSPIDARIA CHILENSIS Dall, 1889.
Proc. U. S. Nat. Mus., vol. 12, p. 282, pl. 13, fig. 13.
Off Oregon in 277 fathoms, and south to coast of Chile in 1,036 fathoms.

CUSPIDARIA NANA Oldroyd, 1918.
Nautilus, vol. 32, No. 1, p. 28.
Baulinas to Monterey, California.

Section CARDIOMYA A. Adams, 1864.

CUSPIDARIA PECTINATA Carpenter, 1864.
Suppl. Brit. Assoc., p. 637; Proc. Acad. Nat. Sci. Phila. for 1865, p. 54.—Arnold, Pal. San Pedro, pl. 18, fig. 11.
Monterey, California, to Panama Bay.

CUSPIDARIA BERINGENSIS Leche, 1883.
Vega Exp. Vet. Arb., vol. 3, p. 438, pl. 32, figs. 1, 2; Bull. U. S. Nat. Mus., No. 37, pl. 3, fig. 6.
Bering Sea to Kodiak Island and Panama Bay.

Clover Pass, Behm Canal. 30 fms. Willett. Elliot Bay, Puget Sound, Eyerdam. 10 fms.

CUSPIDARIA CALIFORNICA Dall, 1886.
Bull. Mus. Comp. Zool., vol. 12, No. 6, p. 296.
Puget Sound to San Diego, California.

CUSPIDARIA PLANETICA Dall, 1908.
Bull. Mus. Comp. Zool., vol. 43, No. 6, p. 433.
Pribilof Islands, Bering Sea, to Coronado Islands, Lower California, in deep water.

CUSPIDARIA BALBOAE Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 407.
Cortez Bank, California, 60 fathoms.

Genus MYONERA Dall and Smith, 1886.

MYONERA TILLAMOOKENSIS Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 407.
Off Tillamook Bay, Oregon, 786 fathoms.

Genus LEIOMYA A. Adams, 1864.

Subgenus PLECTODON Carpenter, 1864.

PLECTODON SCABER Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 638; Proc. Cal. Acad. Sci., vol. 3, p. 207.
Catalina Island, California, to San Diego.

Family VERTICORDIIDAE.

Genus VERTICORDIA Wood, 1844.

VERTICORDIA ORNATA Orbigny, 1846.
Moll. Cuba, vol. 2, p. 292, pl. 27, figs. 30–33.
Catalina Island, California, to Panama Bay. Also Japan and the Antilles.

Order TELEODESMACEA.

Superfamily ASTARTACEA.

Family ASTARTIDAE.

Genus ASTARTE Sowerby, 1816.

Section ASTARTE s. s.

ASTARTE POLARIS Dall, 1903.
Proc. U. S. Nat. Mus., vol. 26, pp. 939, 943, 945, pl. 63, fig. 5.
Aleutian and Shumagin Islands, Alaska. Circumboreal.

ASTARTE COMPACTA Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 642; Proc. Acad. Nat. Sci. Phila. for 1865, p. 57; Proc. U. S. Nat. Mus., vol. 26, p. 944, pl. 63, fig. 8.
Forrester Island to Puget Sound.

ASTARTE WILLETTI Dall, 1917.
Nautilus, vol. 31, No. 1, p. 10.
Forrester Island, 50 fathoms.

Section TRIDONTA Schumacher, 1817.

ASTARTE ROLLANDI Bernardi, 1858.
Journ. de Conchyl., vol. 7, p. 386, pl. 13, fig. 4.
Pribilof and Aleutian Islands to Prince William Sound, Alaska.
Also Kamchatka.

3/ **ASTARTE ROLLANDI LOXIA Dall, 190~~2~~.**
Proc. U. S. Nat. Mus., vol. 26, No. 1342, p. 943.
Semidi Islands, Alaska.

ASTARTE ARCTICA Gray, 1824.
App. Parry's Voy., p. 243.—Sars, Moll. Reg. Arct. Norv., pl. 5, fig. 8.
Circumboreal. Arctic and Bering Seas and the Aleutian Islands.

ASTARTE BOREALIS Schumacher, 1817.
Essai, p. 47, pl. 17, fig. 1.
Polar and Bering Seas, North Japan, and eastward to Prince William Sound, Alaska.

ASTARTE ALASKENSIS Dall, 1903.
Proc. U. S. Nat. Mus., vol. 26, No. 1342, pp. 944, 946, pl. 63, fig. 2.
Southern Bering Sea, the Aleutians and south to Puget Sound. Herschell Island, Arctic Coast.

ASTARTE FABULA Reeve, 1855.
Last of the Arctic Voy., vol. 2, p. 398, pl. 33, fig. 5.
Circumboreal, Arctic Sea and south in Bering Sea to Nunivak Island.

ASTARTE BENNETTII Dall, 1903.
Proc. U. S. Nat. Mus., vol. 26, No. 1342, pp. 945–6, pl. 63, fig. 6.
Polar Sea at Bennett Island, and south in Bering Sea to Nunivak Island.

ASTARTE VERNICOSA Dall, 1903.
Proc. U. S. Nat. Mus., vol. 26, No. 1342, pp. 945, 948, pl. 63, fig. 1.
Arctic and Bering Seas. Attu to Atka Islands in the Aleutian chain.

ASTARTE GLOBOSA Möller, 1842.
2/ Index Moll. Grönl., p. 20.—Reeve, Last of the Arctic Voy., vol. ~~3~~, 398, pl. 33, fig. 6.
Arctic Coast to Greenland.

Section RICTOCYMA Dall, 1872.

ASTARTE ESQUIMALTI Baird, 1863.
Proc. Zool. Soc., p. 70; Proc. U. S. Nat. Mus., vol 26, pl. 63, figs. 11, 12.
Aleutian Islands to Puget Sound.

Genus BERNARDINA Dall, 1910.

BERNARDINA BAKERI Dall, 1910.
Proc. Biol. Soc. Wash., vol. 23, p. 171.
Coronado Islands.

Family CRASSATELLITIDAE.

Genus CRASSATELLITES Kruger, 1823.

CRASSATELLITES FLUCTUATUS Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 642; Proc. Cal. Acad. Sci., vol. 3, p. 209.
Santa Barbara Islands, California.

Genus CRASSINELLA Guppy, 1875.

CRASSINELLA BRANNERI Arnold, 1903.
Pal. San Pedro, p. 127, pl. 18, fig. 12.
San Diego, California, to Panama. Pleistocene of San Pedro, California.

Superfamily CARDITACEA.

Family CARDITIDAE.

Genus CARDITA (Bruguière) Lamarck, 1799.

Section CARDITAMERA Conrad, 1838.

CARDITA SUBQUADRATA Carpenter, 1867. 4/
Suppl. Rep. Assoc., p. 642; Ann. Mag. Nat. Hist., ser. 3, vol. 15, p. 179.—Keep, West Coast Shells, fig. 152.
Queen Charlotte Islands to Todos Santos Bay. Pt. S. Tomas L. Cal. H. H.

Genus VENERICARDIA Lamarck, 1801.

Section CYCLOCARDIA Conrad, 1867.

VENERICARDIA BARBARENSIS Stearns, 1890.
Proc. U. S. Nat. Mus., vol. 13, p. 214, pl. 16, figs. 4, 3.
Santa Barbara Channel to San Diego, California, in deep water.

VENERICARDIA GOULDII Dall, 1902.
Proc. Acad. Nat. Sci. Phila., pp. 709, 714; Proc. U. S. Nat. Mus., vol. 26, No. 1342, pl. 63, fig. 3.
Off San Diego, California.

VENERICARDIA STEARNSII Dall, 1902.
Proc. Acad. Nat. Sci. Phila., pp. 709, 714; Proc. U. S. Nat. Mus., vol. 13, 1890, p. 216, pl. 16, figs. 5, 6.
Puget Sound.

VENERICARDIA PAUCICOSTATA Krause, 1885.
Arch. f. Naturg., vol. 51, Heft 1, p. 30, pl. 3, fig. 3.
Arctic Sea to Fuca Straits.

VENERICARDIA CREBRICOSTATA Krause, 1885.
Arch. f. Naturg., vol. 51, Heft 1, p. 30, pl. 3, fig. 4; Proc. U. S. Nat. Mus., vol. 26, pl. 63, fig. 7.
Point Barrow, Alaska, to Monterey, California.

VENERICARDIA CRASSIDENS Broderip and Sowerby, 1829.
Zool. Journ., vol. 4, p. 365; Proc. U. S. Nat. Mus., vol. 26, p. 949, pl. 43, fig. 9.
Arctic and Bering Seas and eastward to Kodiak Island, Alaska.

VENERICARDIA NODULOSA Dall, 1919.
Proc. Biol. Soc. Wash., vol. 32, p. 249.
Santa Barbara to the Coronado Islands.

VENERICARDIA MONILICOSTA Gabb, 1861.
Proc. Acad. Nat. Sci. Phila., p. 371.
Santa Barbara, Pleistocene. Recent?

VENERICARDIA VENTRICOSA Gould, 1850.
Proc. Boston Soc. Nat. Hist., vol. 3, p. 276; Rep. U. S. Expl. Exp. Moll., p. 417, fig. 532.
Belkoffski Bay, Alaska, to Coronado Islands and Cortez Bank, California.

VENERICARDIA INCISA Dall, 1902.
Proc. Acad. Nat. Sci. Phila., pp. 710, 714; Proc. U. S. Nat. Mus., vol. 26, No. 1342, pl. 63, fig. 4.
Unalaska to the Semidi Islands, Alaska.

Subgenus Miodontiscus Dall, 1903.

MIODONTISCUS PROLONGATUS Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 642; Proc. U. S. Nat. Mus., vol. 13, pl. 16 figs. 7, 9.
Middleton Island, Alaska, to San Diego, California.

MIODONTISCUS MERIDIONALIS Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 408.
Off Point Loma, California, 70 fathoms.

Genus CALYPTOGENA Dall, 1891.

CALYPTOGENA PACIFICA Dall, 1891.
Proc. U. S. Nat. Mus., vol. 14, p. 190; vol. 17, pl. 25, figs. 4, 5.
Clarence Strait, Alaska, to Santa Barbara Channel, California.

CALYPTOGENA ELONGATA Dall, 1916. (Plate 3, fig. 3.)
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 408.
Santa Barbara Islands to San Diego.

Genus MILNERIA Dall, 1881.

MILNERIA MINIMA Dall, 1871.
Amer. Journ. Conch., vol. 7, p. 152, pl. 16, figs. 5, 6.
Monterey to Rosario Bay, Lower California, on *Haliotis*.

MILNERIA KELSEYI Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 408; vol. 8, pl. 25, figs. 4, 7.
Monterey to Point Abreojos, Lower California, under stones.

Superfamily CHAMACEA.

Family CHAMIDAE.

Genus CHAMA Linnaeus, 1758.

CHAMA PELLUCIDA Sowerby, 1834.
Proc. Zool. Soc., p. 150.—Keep, West Coast Shells, fig. 155.
Oregon to Chile, and Galapagos Islands.

CHAMA FRONDOSA Broderip, 1834.
Proc. Zool. Soc., p. 149; Trans. Zool. Soc., vol. 5, pl. 38, figs. 1, 2.
San Diego, California, to Peru. + Galapagos.

CHAMA BUDDIANA C. B. Adams, 1850.
Panama Shells, p. 253.
Bodega Bay, California, to Panama.

Genus PSEUDOCHAMA Odhner, 1917.

PSEUDOCHAMA EXOGYRA Conrad, 1837.
Journ. Acad. Nat. Sci. Phila., vol. 7, p. 256; Conch. Icon. *Chama*, pl. 7, fig. 38.
Oregon to Panama.

Superfamily LUCINACEA.

Family THYASIRIDAE.

Genus THYASIRA (Leach in) Lamarck, 1818.

THYASIRA BISECTA Conrad, 1849.
Rep. U. S. Expl. Exp., vol. 10, p. 724, pl. 17, fig. 10; Proc. U. S. Nat. Mus., vol. 17, pl. 26, figs. 2, 5.
Off Alaska Peninsula and southward to Oregon coast. Also Miocene and Pliocene.

THYASIRA GOULDII Philippi, 1845.
Zeitschr. Mal., vol. 2, p. 74; Binney's Gould's Inv. of Mass., p. 100, fig. 206.
Bering Strait to San Diego. Also Atlantic.

THYASIRA TRISINUATA Orbigny, 1846.
Moll. Cuba, vol. 2, p. 300, pl. 27, figs. 46, 49.
Sitka, Alaska, to San Diego, California. Also Atlantic.

THYASIRA TRISINUATA POLYGONA Jeffreys, 1863.
British Conch., vol. 2, p. 248.
Korea. Gulf of Alaska to San Diego. Also Atlantic.

THYASIRA CYGNUS Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 409.
Southeastern Alaska.

THYASIRA BARBARENSIS Dall, 1889.

Proc. U. S. Nat. Mus., vol. 12, p. 261, pl. 8, fig. 9.

Fuca Straits to Gulf of California.

THYASIRA EXCAVATA Dall, 1901.

Proc. U. S. Nat. Mus., vol. 23, pp. 790, 818, pl. 39, figs. 12, 15.

Oregon to Gulf of California.

THYASIRA TRICARINATA Dall, 1916.

Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 409.

Off Santa Barbara Islands, California, in 1,100 fathoms.

Subgenus AXINULUS Verrill and Bush, 1898.

AXINULUS FERRUGINOSUS Forbes, 1844.

Rep. Brit. Assoc. for 1843, p. 192.—FORBES and HANLEY, Brit. Moll., vol. 2, p. 60, pl. 34, fig. 1.

Aleutian Islands. Also Atlantic and Arctic.

Genus AXINOPSIS G. O. Sars, 1878.

AXINOPSIS VIRIDIS Dall, 1901.

Proc. U. S. Nat. Mus., vol. 23, p. 819, pl. 40, fig. 1.

Arctic Ocean, on the west to Japan, on the east to the Aleutian and Coronado Islands.

AXINOPSIS SERICATUS Carpenter, 1864.

Suppl. Rep. Brit. Assoc., p. 643; Proc. U. S. Nat. Mus., vol. 23, p. 819, pl. 40, fig. 2.

Aleutian Islands south and east to Puget Sound, and Catalina Island, California.

Family DIPLODONTIDAE.

Genus DIPLODONTA Bronn, 1831.

DIPLODONTA ALEUTICA Dall, 1901.

Proc. U. S. Nat. Mus., vol. 23, p. 820, pl. 42, fig. 3.

Cape Lisburne, Arctic Ocean, to the Aleutians and eastward to Sitka Bay, Alaska.

DIPLODONTA ORBELLA Gould, 1852.

Proc. Boston Soc. Nat. Hist., vol. 4, p. 90; Boston Journ. Nat. Hist., vol. 6, pl. 15, fig. 3.

Pribilof Islands, Bering Sea, to Gulf of California.

DIPLODONTA SUBQUADRATA Carpenter, 1855.

Proc. Zool. Soc., p. 230.

Catalina Island, California, to Panama.

Subgenus FELANIELLA Dall, 1899.

FELANIELLA SERICATA Reeve, 1850.

Conch. Icon. *Lucina*, pl. 9, fig. 55.

San Diego, California, to Panama.

Seattle, Wash. Eyerdam.

Family LUCINIDAE.

Genus LUCINA Bruguière, 1797.

LUCINA EDENTULOIDES Verrill, 1870.
Amer. Journ. Sci., vol. 49, No. 6, p. 226.
San Clemente Island, California, to Gulf of California.

Genus PHACOIDES Gray, 1847.

Subgenus Here Gabb, 1866.

HERE RICHTHOFENI Gabb, 1866.
Pal. Cal., vol. 2, p. 29, pl. 8, fig. 49; Proc. U. S. Nat. Mus., vol. 23, pl. 40, figs. 7, 9.
San Pedro, California, to Cape San Lucas.

Subgenus Lucinisca Dall, 1901.

LUCINISCA NUTTALLII Conrad, 1837.
Journ. Acad. Nat. Sci. Phila., vol. 7, p. 255, pl. 20, fig. 2.
Santa Barbara, California, to Mazatlan, Mexico.

Subgenus Lucinoma Dall, 1901.

LUCINOMA ANNULATA Reeve, 1850.
Conch. Icon. *Lucina*, pl. 4, fig. 17; Proc. U. S. Nat. Mus., vol. 23, pl. 40, fig. 10.
Port Althorp, Alaska, to Coronado Islands.

LUCINOMA ANNULATA DENSILINEATA Dall, 1919. = densilirata
Proc. Biol. Soc. Wash., vol. 32, p. 249.
Sitka, Alaska, to Esteros Bay, California.

LUCINOMA AEQUIZONATA Stearns, 1890.
Proc. U. S. Nat. Mus., vol. 13, p. 220, pl. 17, figs. 3, 4.
Santa Barbara Islands to south latitude 38° (Chile).

Subgenus Callucina Dall, 1901.

Section EPILUCINA Dall, 1901.

CALLUCINA CALIFORNICA Conrad, 1837.
Journ. Acad. Nat. Sci. Phila., vol. 7, p. 255, pl. 20, fig. 1.
Crescent City, California, to San Ignacio Lagoon, Lower California.

Subgenus Parvilucina Dall, 1901.

PARVILUCINA TENUISCULPTA Carpenter, 186~~5~~. 4/
Suppl. Rep. Brit. Assoc., p. 642; Proc. U. S. Nat. Mus., vol. 23, p. 828, pl. 40, fig. 5.
Nunivak Island, Bering Sea, to the Coronado Islands, Lower California.

PARVILUCINA APPROXIMATA Dall, 1901.
Proc. U. S. Nat. Mus., vol. 23, p. 813, pl. 39, fig. 4.
Monterey, California, to Panama.

Genus DIVARICELLA Martens, 1880.

DIVARICELLA PERPARVULA Dall, 1901.
Proc. U. S. Nat. Mus., vol. 23, p. 815, pl. 39, fig. 8.
"Monterey" (Gabb). Cape San Lucas to Ecuador.

Superfamily LEPTONACEA.

Family LEPTONIDAE.

Genus ERYCINA Lamarck, 1806.

ERYCINA CATALINAE Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, p. 409.
Catalina Island, California.

ERYCINA CORONATA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, p. 409.
Off Coronado Islands, Lower California.

ERYCINA BAKERI Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, p. 410.
Off South Coronado Island, Lower California.

ERYCINA BALLIANA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, p. 410.
Off South Coronado Island, Lower California.

ERYCINA CHACEI Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, p. 410.
Santa Rosa Island to Coronado Islands.

ERYCINA SANTAROSAE Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, p. 410.
Santa Rosa Island, California.

Genus KELLIA Turton, 1822.

KELLIA LAPEROUSII Deshayes, 1839.
Rev. Zool. Soc. Cuvierienne, p. 357.—Guérin, Mag. de Zool., Moll., pl. 12, 1840.
Bering and Pribilof Islands, Bering Sea, and south to San Diego, California.

KELLIA SUBORBICULARIS Montagu, 1804.
Test. Brit., pp. 39, 564, pl. 26, fig. 6.—Turton, Dithyra Brit., p. 57, pl. 11, figs. 5, 6.
Bering Island, the Aleutians, and south to Panama. Also Atlantic.

Genus ALIGENA H. C. Lea, 1845.

ALIGENA CERITTENSIS Arnold, 1903.
Pal. San Pedro, p. 138, pl. 13, fig. 3.
Pleistocene, San Pedro, California. Recent, La Jolla to Magdalena Bay.

Pt. St. Tomas L. Cal. H. H.

Genus ROCHEFORTIA Velain, 1846.

ROCHEFORTIA TUMIDA Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 129; Proc. U. S. Nat. Mus., vol. 21, p. 892, pl. 87, fig. 7.
Shumagin Islands, Alaska, to San Diego, California. Scammon's Lagoon, H. H.

ROCHEFORTIA PLANATA Dall, 1885.
Arch. f. Naturg, vol. 51, p. 34, pl. 3, fig. 6; Proc. U. S. Nat. Mus., vol. 21, p. 892, pl. 88, fig. 12, 1899.
Icy Cape, Arctic Ocean, south to the Shumagin Islands, Alaska.

ROCHEFORTIA FERRUGINOSA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, p. 411.
San Francisco Bay to Santa Rosa Island, California.

ROCHEFORTIA BERINGENSIS Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, p. 411.
Bering Island, Bering Sea.

ROCHEFORTIA GREBNITZSKII Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, p. 411.
Bering Island, Bering Sea.

ROCHEFORTIA ALEUTICA Dall, 1899.
Proc. U. S. Nat. Mus., vol. 21, p. 892, pl. 87, fig. 6.
Bering Sea to Coronado Islands.

ROCHEFORTIA COMPRESSA Dall, 191/. **(Plate 3, fig. 1.)** 3/
Proc. U. S. Nat. Mus., vol. 45, No. 2002, p. 596.
Shumagin Islands, Alaska, to Gulf of California.

ROCHEFORTIA PEDROANA Dall, 1899.
Proc. U. S. Nat. Mus., vol. 21, p. 893, pl. 88, fig. 4.
San Pedro, California.

ROCHEFORTIA GRIPPI Dall, 1912.
Nautilus, vol. 25, No. 11, p. 128.
San Diego, California.

ROCHEFORTIA GOLISCHI Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, p. 411.
Off Santa Rosa Islands, California.

Genus SERRIDENS Dall, 1899.

SERRIDENS OBLONGA Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 643; Proc. Cal. Acad. Sci., vol. 3, p. 210.
San Pedro to Coronado Islands. S. Hippolite Pt. L. Cal. H. H.

Genus PSEUDOPYTHINA Fischer, 1884.

PSEUDOPYTHINA RUGIFERA Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 643.—WHITEAVES, Rep. Progress, Geol. Surv. Canada, 1880, p. 198 B, fig. 2.
Commensal with *Gebia*. Puget Sound.

PSEUDOPYTHINA COMPRESSA Dall, 1899.
Proc. U. S. Nat. Mus., vol. 21, p. 888, pl. 87, figs. 1, 8.
Cape Lisburne, Arctic Ocean, to Acapulco. Commensal with Crustacean.

PSEUDOPYTHINA MYACIFORMIS Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, p. 412.
Commensal with Crustacean. Puget Sound.

Genus BORNIA Philippi, 1836.

BORNIA RETIFERA Dall, 1899.
Proc. U. S. Nat. Mus., vol. 21, p. 889, pl. 87, fig. 2.
Monterey to Santa Barbara Islands, California.

Genus LEPTON Turton, 1822.

LEPTON MEROËUM Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 643.
San Diego, California.

Genus LASAEA Leach, 1827.

LASAEA RUBRA Montagu, 1804.
Test. Brit., p. 83, pl. 27, fig. 4.—Turton, Dithyra Brit., p. 57, pl. 11, figs. 7–8.
Vancouver Island, British Columbia, to Callao, Peru. Also Atlantic.

Genus TURTONIA Alder, 1848.

TURTONIA MINUTA Fabricius, 1780.
Fauna Grönl., p. 412.—Forbes and Hanley, Brit. Moll., vol. 2, p. 81, pl. 18, fig. 7.
Bering Strait and south to Magdalena Bay, Lower California. Also Northern Atlantic.

TURTONIA OCCIDENTALIS Dall, 1871.
Amer. Journ. Conch., vol. 7, p. 150, pl. 14, figs. 12, 13.
Plover Bay, Bering Sea.

Genus SPORTELLA Deshayes, 1858.

SPORTELLA CALIFORNICA Dall, 1899.
Proc. U. S. Nat. Mus., vol. 21, p. 885, pl. 88, fig. 5.
Monterey, California.

Genus ANISODONTA Deshayes, 1858.

ANISODONTA? PELLUCIDA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, p. 411.
Monterey Bay, California, off Del Monte.

Family CHLAMYDOCONCHIDAE.

Genus CHLAMYDOCONCHA Dall, 1884.

CHLAMYDOCONCHA ORCUTTI Dall, 1884.
Science, vol. 4, No. 76, p. 50.—Bernard, Ann. Sci. Nat., ser. 8, vol. 4, Zool. 1897, p. 221–252, pl. 1, 2.
Monterey to False Bay, San Diego County, California.

Superfamily CARDIACEA.

Family CARDIIDAE.

Genus CARDIUM Linnaeus, 1758.

Subgenus Trachycardium Mörch, 1853.

TRACHYCARDIUM QUADRAGENARIUM Conrad, 1837.
Journ. Acad. Nat. Sci. Phila., p. 230, pl. 17, fig. 5.
Santa Barbara, California, to Todos Santos Bay, Lower California.

Subgenus Cerastoderma Mörch, 1853.

CERASTODERMA CORBIS Martyn, 1784.
Figs. Nondescript Shells, table 2, pl. 80; Univ. Cal. Zool. Publ., vol. 14, pl. 20, fig. 1.
Nunivak, Pribilof, and Commander Islands, Bering Sea, south to Hakodate, Japan, and San Diego, California (Lower California?).

CERASTODERMA CILIATUM Fabricius, 1780.
Fauna Grönl., p. 410; Binney's Gould's Inv. Mass., p. 140, fig. 150.
Circumboreal. Arctic Ocean and southward to Puget Sound and North Japan.

CERASTODERMA DECORATUM Grewingk, 1850.
Verh. Min. Ges. zu St. Petersburg, 1848–9, p. 274, pl. 4, figs. 3 *a–g*.
Pleistocene of Alaska and British Columbia. Recent?

CERASTODERMA CALIFORNIENSE Deshayes, 1841. **(Plate 14, fig. 8.)**
Guérin, Mag. de Zool., Moll., pl. 47.
Arctic Ocean to San Diego, California, North Japan and Okhotsk Sea.

CERASTODERMA CALIFORNIENSE COMOXENSE Dall, 1900.
Proc. U. S. Nat. Mus., vol. 23, No. 1214, p. 390.
Pleistocene of Vancouver Island. Recent ?

CERASTODERMA FUCANUM Dall, 1907.
Nautilus, vol. 20, No. 10, p. 112.
Southern Bering Sea, off Unimak Island, and south to Monterey, California.

? Subgenus Ringicardium Fischer, 1887.

RINGICARDIUM PROCERUM Sowerby, 1833.
Proc. Zool. Soc., p. 83; Conch. Ill. *Cardium*, fig. 23.
Pleistocene, San Diego. Cerros Island to Payta, Peru. Scammon's Lagoon, H.H.

Subgenus Fragum Bolten, 1798.

FRAGUM BIANGULATUM Sowerby, 1829.
Zool. Journ., vol. 5, pt. 4, p. 367; Conch. Ill. *Cardium*, fig. 2.
San Pedro, California, to Panama.

Subgenus Trigoniocardia Dall, 1900.

TRIGONIOCARDIA EUDOXIA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, p. 412.
Catalina Island, California, to Gulf of California.

Subgenus LAEVICARDIUM Swainson, 1840.

LAEVICARDIUM ELATUM Sowerby, 1833.
Proc. Zool. Soc., p. 84; Conch. Ill. *Cardium*, fig. 3.
San Pedro, California, south to Panama.

LAEVICARDIUM SUBSTRIATUM Conrad, 1837.
Journ. Acad. Nat. Sci. Phila., vol. 7, p. 228, pl. 17, fig. 2.
Catalina Island and San Pedro, California, to Acapulco.

Genus SERRIPES Beck, 1841.

SERRIPES GRÖNLANDICUS Gmelin, 1792.
Syst. Nat., vol. 7, p. 3232; Binney's Gould's Inv. Mass., p. 145, fig. 454.
Circumboreal. Arctic Seas and south to Hakodate, Japan, and Puget Sound.

SERRIPES LAPEROUSII Deshayes, 1839.
Rev. Zool. Soc. Cuvierienne, p. 360.—GUÉRIN, Mag. de Zool., Moll., pl. 48, 1841.
Bering Strait to Hakodate, Japan, and Sitka, Alaska.

Genus PROTOCARDIA Beyrich, 1845.

PROTOCARDIA CENTIFILOSA Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 642; Univ. Cal. Zool. Publ., vol. 14, pl. 20, fig. 2 *a–d*.
Bodega Bay to Lower California.

PROTOCARDIA CENTIFILOSA RICHARDSONII Whiteaves, 1878. **(Plate 2, fig. 3.)**
Canadian Nat., ser. 2, vol. 8, p. 469.
Queen Charlotte Islands to San Francisco. Forrester Id., Willett.

Family VESICOMYACIDAE.

Genus VESICOMYA Dall, 1886.

VESICOMYA OVALIS Dall, 1896.
Proc. U. S. Nat. Mus., vol. 18, p. 18; Bull. Mus. Comp. Zool., vol. 43, p. 417.
Clarence Strait, Alaska, 322 fathoms, and in Panama Bay, in 1,672 fathoms.

VESICOMYA LEPTA Dall, 1896.
Proc. U. S. Nat. Mus., vol. 18, p. 17; Bull. Mus. Comp. Zool., vol. 43, p. 416, pl. 18, figs. 12, 14.
Off Tillamook, Oregon, and south to the Gulf of California, in deep water.

VESICOMYA STEARNSII Dall, 1895. **(Plate 1, figs. 6, 7.)**
Proc. U. S. Nat. Mus., vol. 17, pp. 693, 696, fig. 1 *A*; vol. 18, p. 17.
Off La Jolla, California, and south to the Gulf of California, in deep water

Subgenus ARCHIVESICA Dall, 1908.

ARCHIVESICA GIGAS Dall, 1896.
Proc. U. S. Nat. Mus., vol. 18, p. 18; Bull. Mus. Comp. Zool., vol. 43, p. 418, pl. 16, fig. 9.
Off Point Sur, California, and in the Gulf of California, in deep water.

Halfmoon Bay. Cal. (Weymouth).

San Hippolito Pt. L. Cal. Hemphill Coll.

Santa Monica (Weymouth).

Superfamily VENERACEA.

Family VENERIDAE.

Subfamily Dosiniinae.

Genus DOSINIA Scopoli, 1777.

Section DOSINIDIA Dall, 1902.

DOSINIA PONDEROSA Gray, 1838.
The Analyst, vol. 8, No. 24, p. 309.—Sowerby, Thes. Conch. *Artemis*, pl. 140, fig. 2.
San Diego, California, and south to Payta, Peru.

Subfamily Meretricinae.

Genus TIVELA Link, 1807.

Subgenus Pachydesma Conrad, 1854.

PACHYDESMA STULTORUM Mawe, 1823.
Linn. Syst. Conch., p. 37, pl. 9, fig. 7; Proc. U. S. Nat. Mus., vol. 21, pl. 23, 24, 25.
Santa Cruz, California, and south to Socorro Island.

Genus TRANSENNELLA Dall, 1883.

TRANSENNELLA TANTILLA Gould, 1852.
Boston Journ. Nat. Hist. vol. 6, p. 406, pl. 15, fig. 10; (separates, Apr. 1852).
Sitka Harbor, Alaska, and south to Lower California.

Genus AMIANTIS Carpenter, 1863.

AMIANTIS CALLOSA Conrad, 1837.
Journ. Acad. Nat. Sci., vol. 7, p. 252; Thes. Conch. *Venus*, pl. 114, figs. 44, 45.
San Pedro, California, to Gulf of Tehuantepec.

Genus PITARIA (Roemer), 1857.

PITARIA NEWCOMBIANA Gabb, 1865.
Proc. Cal. Acad. Sci., vol. 3, p. 189; Proc. U. S. Nat. Mus., vol. 15, pl. 23, fig. 4.
Monterey, California, to the Gulf of California and Clarion Island.

Genus ANTIGONA Schumacher, 1817.

Section VENTRICOLA Roemer, 1857.

ANTIGONA FORDI Yates, 1890.
Santa Barbara Soc. Nat. Hist., Bull. No. 2, p. 46, pl. 1, figs. 1–5.
Monterey, California, to Lower California. Panama?

Genus SAXIDOMUS Conrad, 1837.

SAXIDOMUS NUTTALLII Conrad, 1837.
Journ. Acad. Nat. Sci., Phila., vol. 7, p. 249, pl. 19, fig. 12.
Baulinas Bay, California, to San Diego.

SAXIDOMUS GIGANTEUS Deshayes, 1839.
Revue Zool. Soc. Cuvierienne, p. 359.—Guérin, Mag. de Zool. Moll., 1841, pl. 43; Bull. U. S. Fish Comm., vol 3, p. 355, fig. 2.
Aleutian Islands from Attu eastward and south to Monterey, California.

SAXIDOMUS GIGANTEUS BREVIS Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 413.
Admiralty Island, Alaska, to Tacoma, Washington.

Subfamily VENERINAE.

Genus CHIONE Megerle, 1811.

CHIONE FLUCTIFRAGA Sowerby, 1853.
Thes. Conch. *Venus*, p. 712, pl. 154, figs. 42, 43.
San Pedro, California, to the Gulf of California.

CHIONE UNDATELLA Sowerby, 1835.
Proc. Zool. Soc., p. 22; Thes. Conch., *Venus*, p. 711, pl. 153, fig. 22.
San Pedro, California, and south to Guayaquil.

CHIONE SUCCINCTA Valenciennes, 1832.
Humboldt and Bonpland, Obs. Zool., p. 219, pl. 48, figs. 1 *a–e*.
San Pedro, California, to Panama.

Genus VENUS (Linnaeus) Lamarck, 1799.

VENUS KENNICOTTII Dall, 1871.
Amer. Journ. Conch., vol. 7, p. 147, pl. 16, fig. 1; Proc. U. S. Nat. Mus., vol. 24, p. 560, pl. 40, fig. 7, 1902.
Neah Bay, Washington, to Little River, Mendocino County, California.

Genus MARCIA H. and A. Adams, 1857.

MARCIA KENNERLYI (Carpenter) Reeve, 1863.
Conch. Icon. *Venus*, sp. 41; Proc. U. S. Nat. Mus., vol. 26, p. 396, pl. 14, fig. 1.
Kodiak Island, Alaska, to Carmel Bay, California.

Section VENERELLA Cossmann, 1886.

MARCIA SUBDIAPHANA Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 640; Proc. U. S. Nat. Mus., vol. 14, p. 185, pl. 7, figs. 5, 6.
Sannakh Islands, Alaska, to the Santa Barbara Islands, California.

Genus PAPHIA Bolten, 1798.

Subgenus PROTOTHACA Dall, 1902.

Humboldt Bay (Weymouth). San Martin I. L. Cal. Baker.

Mugu Bay, Ventura Co. (C. E. White).

Morro Bay, S. L. Obispo Co. E. P. Chace
Mugu Bay, Ventura Co. (White). Galapagos, Pilsbry.

Turtle Bay, Lo. Cal. Hemphill coll.

Section CALLITHACA Dall, 1902.

PROTOTHACA TENERRIMA Carpenter, 1856.
Proc. Zool. Soc., p. 200; Univ. Cal. Zool. Publ., vol. 14, p. 272, pl. 22.
Puget Sound to San Quentin Bay, Lower California.

Section PROTOTHACA s. s.

PROTOTHACA STAMINEA Conrad, 1837.
Journ. Acad. Nat. Sci. Phila., vol. 7, p. 250, pl. 19, fig. 15.
Commander and Aleutian Islands, to Kamchatka and North Japan, and to Puget Sound and Socorro Island.

PROTOTHACA STAMINEA STAMINEA Conrad, 1837.
Journ. Acad. Nat. Sci. Phila., vol. 7, p. 250, pl. 19, fig. 15.
Crescent City, California, to Socorro Island.

PROTOTHACA STAMINEA RUDERATA Deshayes, 1853.
Cat. Conch. Brit. Mus., vol. 1, p. 136.
Southern Bering Sea to Lobitas, California.

PROTOTHACA STAMINEA PETITII Deshayes, 1839.
Revue Zool. Soc. Cuvierienne, p. 359.—GUÉRIN, Mag. de Zool. Moll., 1841, pl. 39.
Aleutian Islands to San Quentin Bay, Lower California.

PROTOTHACA STAMINEA LACINIATA Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 641; Journ. de Conchyl., vol. 12, p. 136.—ARNOLD, Pal. San Pedro, pl. 14, fig. 5.
Unalaska, Alaska, to San Diego, California.

PROTOTHACA STAMINEA ORBELLA Carpenter, 1864.
Suppl. Rep. Brit. Soc., p. 641; Univ. Cal. Zool. Publ., vol. 14, p. 271, pl. 19, fig. 6.
Kodiak Island, Alaska, to San Diego, California.

PROTOTHACA STAMINEA SPATIOSA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, p. 413.
Puget Sound to Anaheim Bay, California.

PROTOTHACA GRATA Say, 1831.
Amer. Conch., vol. 3, pl. 26.
San Pedro (Williamson). Gulf of California to Panama. Chile,

Genus LIOCYMA Dall, 1870.

LIOCYMA BECKII Dall, 1870.
Proc. Boston Soc. Nat. Hist., vol. 13, p. 257; Amer. Journ. Conch., vol. 7, p. 145, pl. 14, fig. 7.
Plover Bay to North Japan, on the east to Port Althorp, Alaska.

LIOCYMA SCAMMONI Dall, 1871.
Amer. Journ. Conch., vol. 7, p. 145, pl. 14, fig. 9.
Port Simpson, British Columbia.

LIOCYMA VIRIDIS Dall, 1871.
Amer. Journ. Conch., vol. 7, p. 146, pl. 14, fig. 8.
Arctic Sea southward to North Japan, and on the east to the Kodiak Islands, Alaska.

Genus VENERUPIS Lamarck, 1818.

VENERUPIS LAMELLIFERA Conrad, 1837.
Journ. Acad. Nat. Sci. Phila., vol. 7, p. 251, pl. 19, fig. 19.
Monterey to San Diego, California.

Subfamily GEMMINAE.

Genus GEMMA Deshayes, 1853.

GEMMA GEMMA Totten, 1834.
Amer. Journ. Sci., vol. 26, No. 2, p. 367, fig. 2.
San Juan Islands to San Francisco Bay. Introduced from the Atlantic Coast with "seed" oysters. (San Diego?)

Genus PSEPHIDIA Dall, 1902.

PSEPHIDIA LORDI Baird, 1863.
Proc. Zool. Soc., p. 69, pl. 2, fig. 10; Proc. U. S. Nat. Mus., vol. 26, pl. 16, fig. 5.
Unalaska, Alaska, to Coronado Islands.

PSEPHIDIA OVALIS Dall, 1902.
Proc. U. S. Nat. Mus., vol. 26, p. 407, pl. 16, fig. 4.
St. Paul Island, Bering Sea, to San Diego, California.

PSEPHIDIA CYMATA Dall, 1913. **(Plate 3, fig. 2.)**
Proc. U. S. Nat. Mus., vol. 45, No. 2002, p. 593.
Santa Barbara Islands, California, to Gulf of California.

PSEPHIDIA BRUNNEA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 413.
Monterey, California, to San Ipolito Point, Lower California.

? PSEPHIDIA SALMONEA Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 641; Proc. Cal. Acad. Sci., vol. 3, p. 209.
Catalina Island to San Diego, California. San Martin Id. L. Cal. Baker.

Family PETRICOLIDAE.

Genus PETRICOLA Lamarck, 1801.

PETRICOLA CARDITOIDES Conrad, 1837.
Journ. Acad. Nat. Sci. Phila., vol. 7, p. 255, pl. 20, fig. 8.
Vancouver Island to Magdalena Bay, Lower California.

Subgenus PETRICOLARIA Stoliczka, 1870.

PETRICOLARIA DENTICULATA Sowerby, 1834.
Proc. Zool. Soc., p. 46; Conch. *Petricola*, p. 773, pl. 166, figs. 6, 7.
Monterey to Payta, Peru.

Friday Harbor, Vancouver Id. & Decatur Wash. Engberg.

"Circe" margarita Carpenter is reported from Hemphill coll. by Eric Jordan as collected at Catalina Id. needs confirmation.

? Family COOPERELLIDAE.

Genus COOPERELLA Carpenter, 1864.

COOPERELLA SUBDIAPHANA Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 639.—Arnold, Pal. San Pedro, p. 153, pl. 13, fig. 1.
Queen Charlotte Islands to Gulf of California.

Superfamily TELLINACEA.

Family TELLINIDAE.

Genus TELLINA (Linnaeus) Lamarck, 1799.

TELLINA IDAE Dall, 1891.
Proc. U. S. Nat. Mus., vol. 14, p. 183, pl. 6, fig. 3; pl. 7, figs. 1, 4; vol. 23, pl. 4, figs. 10, 11.
Santa Barbara Islands and San Pedro, California.

Subgenus ARCOPAGIA Leach, 1827.

Section MERISCA Dall, 1900.

ARCOPAGIA LAMELLATA Carpenter, 1857.
Mazatlan Cat., p. 37, No. 58.
San Diego, California, to Mazatlan.

ARCOPAGIA DECLIVIS Sowerby, 1868.
Conch. Icon. *Tellina*, pl. 44, fig. 261.
Catalina Island, California, to Panama.

Subgenus MOERELLA Fischer, 1887.

MOERELLA SALMONEA Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 639; Univ. Cal. Zool. Publ., vol. 14, p. 276, pl. 25, fig. 3.
Aleutian Islands to San Pedro, California.

MOERELLA MEROPSIS Dall, 1900.
Proc. U. S. Nat. Mus., vol. 23, pp. 303, 317, pl. 3, fig. 1.
San Diego, California, to the Gulf of California.

Subgenus ANGULUS Megerle, 1811.

ANGULUS CARPENTERI Dall, 1900.
Proc. U. S. Nat. Mus., vol. 23, pp. 303, 320; Univ. Cal. Zool. Publ., vol. 14, p. 276, pl. 25, fig. 10. Forrester Island to Gulf of California. Panama

ANGULUS PANAMENSIS Dall, 1900.
Proc. U. S. Nat. Mus., vol. 23, p. 319, pl. 3, fig. 3.
Catalina Island, California, to Panama.

ANGULUS MODESTUS Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 639; Proc. Acad. Nat. Sci. Phila. for 1865, p. 54.
Vancouver Island to Lower California.

Subgenus OUDARDIA Monterosato, 1884.

OUDARDIA BUTTONI Dall, 1900.
Proc. U. S. Nat. Mus., vol. 23, p. 304, pl. 4, figs. 12, 13.
Lituya Bay, Alaska, to the Gulf of California.

Subgenus PERONIDIA Dall, 1900.

PERONIDIA BODEGENSIS Hinds, 1844.
Voy. *Sulphur*, Zool., p. 67, pl. 21, fig. 2.
Queen Charlotte Islands, British Columbia, to Gulf of California. Japan?

PERONIDIA SANTAROSAE Dall, 1900.
Proc. U. S. Nat. Mus., vol. 23, pp. 305, 321, pl. 3, fig. 6; pl. 4, figs. 1, 2.
Santa Barbara Islands and San Diego, California.

PERONIDIA LUTEA Gray, 1828.
Index Test. Suppl., pl. 1, *Tellina*, fig. 3.
Arctic Ocean, Bering Sea, North Japan, the Aleutian Islands and east to Cook's Inlet, Alaska.

PERONIDIA LUTEA VENULOSA Schrenck, 1861.
Bull. Imp. Akad. Sci. St. Petersburg, vol. 4, p. 412; Reise in Amurl., p. 556, pl. 22, figs. 2–5.
Shumagin Islands, Alaska; Sakhalin Island, Japan.

Genus METIS H. and A. Adams, 1856.

METIS ALTA Conrad, 1837.
Journ. Acad. Nat. Sci. Phila., vol. 7, p. 258; Thes. Conch., *Tellina*, pl. 62, fig. 200.
Santa Barbara, California, to San Diego.

Genus MACOMA Leach, 1819.

MACOMA MIDDENDORFFII Dall, 1884.
Proc. U. S. Nat. Mus., vol. 7, p. 347; vol. 9, p. 308, pl. 4, fig. 11.
Bering Strait, south to the Commander and Aleutian Islands and eastward to Chirikoff Island, Alaska.

MACOMA INCONGRUA Martens, 1865.
Ann. Mag. Nat. Hist., vol. 16, p. 430; Conch. Icon. *Tellina*, pl. 27, fig. 146.
Arctic Ocean, south to Japan on the west and to San Diego, California, on the east. Fossil, Sankaty Head, Nantucket Id. Mass.

MACOMA BROTA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, p. 413; Zool. Beechey's Voy. Moll., pl. 44, fig. 7.
Arctic Ocean. Bering Sea and south to Puget Sound.

MACOMA BROTA LIPARA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, p. 414.
Bering Sea to Puget Sound.

MACOMA SITKANA Dall, 1900.
Proc. U. S. Nat. Mus., vol. 23, pp. 307, 323, pl. 4, figs. 6, 7.
Kodiak Island to Lituya Bay and Sitka, Alaska.

Behm Canal, 40 fms. Willett.

MACOMA CALCAREA Gmelin, 1792.

Syst. Nat., vol. 7, p. 3236; Conch. Cab., ed. 1, vol. 6, p. 140, pl. 13, fig. 136.

Arctic Ocean to North Japan and to Monterey Bay, California. Circumboreal.

MACOMA MOESTA Deshayes, 1854.

Proc. Zool. Soc., p. 361; Proc. U. S. Nat. Mus., vol. 23, pl. 4, fig. 8.

Arctic Ocean, Bering Sea and eastward to the Shumagin Islands. Circumboreal.

MACOMA NASUTA Conrad, 1837.

Journ. Acad. Nat. Sci. Phila., vol. 7, p. 258; Thes. Conch., *Tellina*, p. 314, pl. 64, fig. 224.

Kodiak Island and Cook's Inlet, Alaska, south to Scammon Lagoon, Lower California.

MACOMA INQUINATA Deshayes, 1854.

Proc. Zool. Soc., p. 357; Conch. Icon., *Tellina*, pl. 30, fig. 164.

Bering Strait to Japan on the west and to Monterey Bay, California, on the east.

MACOMA INQUINATA ARNHEIMI Dall, 1916.

Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 414.

Kodiak Island, Alaska, and south to San Francisco Pleistocene of San Pedro.

MACOMA BALTHICA Linnaeus, 1758.

Syst. Nat., ed. 10, p. 677; Thes. Conch., *Tellina*, pl. 59, fig. 121.

Circumboreal. Point Barrow, Arctic Ocean to North Japan and San Diego, California.

MACOMA INFLATULA Dall, 1897.

Bull. Nat. Hist. Soc. Brit. Col., No. 2, p. 11, pl. 1, figs. 19, 20.

Arctic Ocean and south to Ballenas Lagoon, Lower California.

MACOMA LEPTONOIDEA Dall, 1895.

Proc. U. S. Nat. Mus., vol. 23, pp. 308, 323, pl. 4, figs. 4, 9.

Santa Barbara Channel. Also Texas coast.

MACOMA ONEILLI Dall, 1919.

Sci. Res. Canadian Arctic Exp., vol. 8, pt. A., p. 20A, pl. 2, fig. 1.

Dolphin and Union Straits, Arctic Coast.

MACOMA KELSEYI Dall, 1900.

Trans. Wagner Inst., vol. 3, p. 1052, pl. 49, fig. 7.

Pleistocene, San Diego, California. Recent?

MACOMA QUADRANA Dall, 1916.

Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 414.

Boca de Quadra, Alaska, and south to Coronado Islands, Lower California.

MACOMA CARLOTTENSIS Whiteaves, 1880.

Rep. Progress Geol. Surv. Canada, 1879–80, p. 196 B, fig. 1.

Arctic Ocean to Puget Sound.

MACOMA LIOTRICHA Dall, 1897.

Nat. Hist. Soc. Brit. Col., Bull. No. 2, p. 12, pl. 1, fig. 21.

Aleutian Islands and eastward to the Shumagin Islands, Alaska.

MACOMA EXPANSA Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 639; Proc. Acad. Nat. Sci. Phila. for 1865, p. 56.
Puget Sound to La Jolla, California.

MACOMA YOLDIFORMIS Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 639; Proc. Acad. Nat. Sci. Phila. for 1865, p. 55.—Arnold, Pal. San Pedro, pl. 16, fig. 6.
Fuca Strait to San Diego, California.

MACOMA TRUNCARIA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 414.
Island near Cape Halkett, Arctic Ocean.

MACOMA ALASKANA Dall, 1900.
Proc. U. S. Nat. Mus., vol. 23, p. 323, pl. 3, fig. 5.
Lituya Bay, to Gulf of Georgia.

Section REXITHAERUS Conrad, 1869.

MACOMA INDENTATA Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 639; Proc. Cal. Acad. Sci., vol. 3, p. 208.—Arnold, Pal. San Pedro, pl. 16, fig. 1.
Puget Sound to Lower California. Scammon's Lagoon, H. H. coll.

MACOMA INDENTATA TENUIROSTRIS Dall, 1900.
Proc. U. S. Nat. Mus., vol. 23, No. 1210, p. 324.
San Pedro and the Santa Barbara Islands, to San Diego (Kelsey).

MACOMA SECTA Conrad, 1837.
Journ. Acad. Nat. Sci. Phila., vol. 7, p. 257; Thes. Conch., *Tellina*, pl. 65, figs. 245, 248.
Vancouver Island and south to the Gulf of California. Japan ?

Family SEMELIDAE.

Genus SEMELE Schumacher, 1817.

SEMELE DECISA Conrad, 1837.
Journ. Acad. Nat. Sci. Phila., vol. 7, p. 239, pl. 19, fig. 2.
San Pedro to San Diego, California. San Martin Id. L. Cal. Baker.
Pt. Abreojos. H. H. coll.

SEMELE STRIOSA C. B. Adams, 1852.
Panama Shells, p. 291.
Catalina Island, California, to Panama.

SEMELE RUPICOLA Dall, 1915.
Proc. Acad. Nat. Sci. Phila. for 1915, p. 26.
Santa Cruz, California, to Gulf of California.

SEMELE RUBROPICTA Dall, 1871.
Amer. Journ. Conch., vol. 7, p. 144, pl. 14, fig. 10.
Forrester Island, Alaska, to Tia Juana, Lower California.

SEMELE PACIFICA Dall, 1915.
Proc. Acad. Nat. Sci. Phila. for 1915, p. 27.
Catalina Island, California, to Acapulco.

Semele corrugata Sby.
Magdalena Bay – Guayaquil. Valparaiso.
Alive at San Pedro, Tremper.

Semele flavescens Gould. San Pedro, Oldroyd, (?).
Scammon's Lagoon. H. H. coll. Callao, E. Jordan.

SEMELE INCONGRUA Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 640; Proc. Cal. Acad. Sci., vol. 3, p. 208.
Monterey, California, to the Coronado Islands.

SEMELE PULCHRA Sowerby, 1832.
Proc. Zool. Soc., p. 57; Conch. Ill., *Amphidesma*, fig. 2.
Monterey, California, to Ecuador.

Genus CUMINGIA Sowerby, 1833.

CUMINGIA LAMELLOSA Sowerby, 1833.
Proc. Zool. Soc., p. 34; Conch. Icon., *Cumingia*, pl. 1, fig. 5.
Crescent City, California, south to Payta, Peru.

Family DONACIDAE.

Genus DONAX Linnaeus, 1758.

DONAX CALIFORNICA Conrad, 1837.
Journ. Acad. Nat. Sci. Phila., vol. 7, p. 254, pl. 19, fig. 1.
San Pedro, California, to Panama. Mugu Bay, Ventura Co. (White)

DONAX GOULDII Dall, 1919.
Boston Journ. Nat. Hist., vol. 6, p. 394 (as *obesus*), pl. 15, fig. 9.
Santa Barbara, California, to Acapulco. San Luis Obispo bay (Weymouth).

DONAX PUNCTATOSTRIATA Hanley, 1843.
Proc. Zool. Soc., p. 5; Thes. Conch., *Donax*, p. 310, figs. 49, 50.
San Pedro, California, to Payta, Peru.

DONAX CONRADI Deshayes, 1854.
Proc. Zool. Soc., p. 351; Conch. Icon., *Donax*, pl. 5, fig. 29.
San Diego, California, to Central America.

Family PSAMMOBIIDAE.

Genus PSAMMOBIA Lamarck, 1818.

Subgenus Gobraeus Leach, 1852.

GOBRAEUS REGULARIS Carpenter, 1864.
Ann. Mag. Nat. Hist., ser. 3, vol. 13, p. 312.
San Diego, California, to Cape San Lucas.

GOBRAEUS CALIFORNICUS Conrad, 1848.
Journ. Acad. Nat. Sci. Phila., vol. 7, pl. 19, fig. 3; Proc., vol. 4, p. 121.
Japan, Kamchatka, the Aleutian Islands and south to San Diego, California.

GOBRAEUS EDENTULUS Gabb, 1869.
Pal. Cal., vol. 2, p. 53, pl. 15, fig. 11.
San Pedro and Catalina Island, California, to San Diego. Also Pliocene of California.

Genus SANGUINOLARIA Lamarck, 1799.

Section NUTTALLIA Dall, 1897.

SANGUINOLARIA NUTTALLII Conrad, 1837.
Journ. Acad. Nat. Sci. Phila., vol. 7, p. 230, pl. 17, fig. 6.
San Pedro to Magdalena Bay, Lower California. ?Japan.

Genus HETERODONAX Mörch, 1853.

a/ **HETERODONAX BIMACULATA** Linnaeus, 1758.
Syst. Nat., ed. 10, p. 677; Conch. Icon., *Tellina*, pl. 18, fig. 94.
Monterey, California, to Panama. Also Atlantic.

Genus TAGELUS Gray, 1847.

TAGELUS CALIFORNIANUS Conrad, 1837.
Journ. Acad. Nat. Sci. Phila., vol. 7, p. 233, pl. 18, fig. 3.
Santa Barbara, California, to Gulf of Tehuantepec.

TAGELUS AFFINIS C. B. Adams, 1852.
Panama Shells, p. 300.
Santa Barbara, California, to Panama.

Section MESOPLEURA Conrad, 1837.

TAGELUS SUBTERES Conrad, 1837.
Journ. Acad. Nat. Sci. Phila., vol. 7, p. 233, pl. 17, fig. 10.
Santa Barbara, California, to Panama.

^

Superfamily SOLENACEA.

Family SOLENIDAE.

Genus SOLEN (Linnaeus) Scopoli, 1777.

SOLEN SICARIUS Gould, 1850.
Proc. Boston Soc. Nat. Hist., vol. 3, p. 214; Rep. U. S. Expl. Exp. Moll., p. 287, fig. 501.
Vancouver Island to San Quentin, Lower California.

SOLEN ROSACEUS Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 638; Ann. Mag. Nat. Hist., ser. 3, vol. 15, p. 177.
Santa Barbara, California, to Gulf of California.

Genus ENSIS Schumacher, 1817.

ENSIS CALIFORNICUS Dall, 1899.
Proc. U. S. Nat. Mus., vol. 22, p. 110.
Monterey, California, to Gulf of California.

Genus SILIQUA Megerle, 1811.

SILIQUA LUCIDA Conrad, 1837.
Journ. Acad. Nat. Sci., vol. 7, p. 231, pl. 17, fig. 8.
Monterey, California, to Todos Santos Bay, Lower California.

Mugu Bay. Ventura Co. (White). Morro Bay. E. P. Chace.

Tagelus (Mesopleura) politus Cpr. S. Pedro, Strong, Price, to Panama.

Baulinas Bay, Clark.

+ Mactra angusta Desh. PZS. 1854, p. 67. *fide* Packard.

San Pedro, Lt. Green, La Paz, Rich.

SILIQUA MEDIA Gray, 1839.
Zool. Beechey's Voy., p. 153, pl. 44, fig. 2.
Arctic Ocean and south to the Okhotsk Sea, Bering Sea, and eastward to Cooks Inlet, Alaska.

SILIQUA PATULA Dixon, 1788.
Dixon's Voy., p. 355, fig. 2.
The Okhotsk Sea, the southern border of Bering Sea and eastward to Sitka, Alaska.

SILIQUA PATULA ALTA Broderip and Sowerby, 1829.
Zool. Journ., vol. 4, p. 362.
Bering Strait, south to Unalaska and eastward to Kodiak Island, Alaska.

SILIQUA PATULA NUTTALLII Conrad, 1837.
Journ. Acad. Nat. Sci. Phila., vol. 7, p. 232, pl. 17, fig. 9.
Lituya Bay, Alaska, and south to Monterey, California.

Superfamily MACTRACEA.

Family MACTRIDAE.

Genus ANATINA Schumacher, 1817.

ANATINA UNDULATA Gould, 1851.
Proc. Boston Soc. Nat. Hist., vol. 4, p. 89; Journal, vol. 4, pl. 15, fig. 7.
San Pedro, California, to Panama.

Genus MACTRA Linnaeus, 1758.

Subgenus MACTROTOMA Dall, 1894.

MACTROTOMA DOLABRIFORMIS Conrad, 1867.
Amer. Journ. Conch., vol. 3, p. 193; Nautilus, vol. 7, No. 12, p. 138, pl. 5, fig. 1.
Lobitas, California, to Topolobampo, Mexico. Panama, Conrad,

× **MACTROTOMA CALIFORNICA Conrad, 1837.**
Journ. Acad. Nat. Sci. Phila., vol. 7, p. 340, pl. 18, fig. 12.
Neah Bay, Washington, to San Diego, California. Manuel Lagoon. L. Cal, H.H,

MACTROTOMA NASUTA Gould, 1851.
Proc. Boston Soc. Nat. Hist., vol. 4, p. 88.
San Diego, California. (West Colombia?)

Genus SPISULA Gray, 1838.

Subgenus HEMIMACTRA Swainson, 1840.

Section MACTROMERIS Conrad, 1868.

HEMIMACTRA (POLYNYMA Stimpson, var.) ALASKANA Dall, 1894. ? procera Solander,
Nautilus, vol. 8, No. 4, p. 40; Zool. Beechey's Voy. Moll., p. 154, pl. 44, fig. 8.
Arctic Ocean at Cape Lisburne, south to Bering Sea and the Aleutians and eastward to Puget Sound. North Japan, the Kuril Islands and the Okhotsk Sea (Schrenck).

HEMIMACTRA HEMPHILLI Dall, 1894.
Nautilus, vol. 7, No. 12, p. 137, pl. 5, fig. 2.
San Pedro to San Diego, California. Todos Santos Bay, L. Cal, H. H.

HEMIMACTRA CATILLIFORMIS Conrad, 1867.
Amer. Journ. Conch., vol. 3, p. 193; Nautilus, vol. 7, No. 12, p. 137, pl. 5, fig. 3.
Neah Bay to San Diego, California.

trans-pose

HEMIMACTRA FALCATA Gould, 1850.
Proc. Boston Soc. Nat. Hist., vol. 3, p. 216; Rep. U. S. Expl. Exp., Moll., p. 393, figs. 506 *a–b*.
Puget Sound to Cortez Bank and the Coronado Islands. Newport, Cal. Manuel Lagoon, H. H.

Subgenus SYMMORPHOMACTRA Dall, 1894.

SYMMORPHOMACTRA PLANULATA Conrad, 1837. **(Plate 3, fig. 9.)**
Journ. Acad. Nat. Sci. Phila., vol. 7, p. 240.
Monterey to Cape San Lucas.

Genus SCHIZOTHAERUS Conrad, 1853.

SCHIZOTHAERUS NUTTALLII Conrad, 1837.
Journ. Acad. Nat. Sci. Phila., vol. 7, p. 235, pl. 18, fig. 1; Bull. U. S. Fish Comm., vol. 3, No. 23, p. 354, fig. 1.
Wrangell, Alaska, to San Diego, California. Japan, Baker, Hirasé,

SCHIZOTHAERUS NUTTALLII CAPAX Gould, 1850.
Proc. Boston Soc. Nat. Hist., vol. 3, p. 217; Conch. Icon. *Mactra*, pl. 1, fig. 4.
Kodiak Island, Alaska, to San Francisco, California.

Family MESODESMATIDAE.

Genus ERVILIA Turton, 1822.

ERVILIA CALIFORNICA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 414.
San Pedro, California, to Magdalena Bay.

Superfamily MYACEA.

Family MYACIDAE.

Genus MYA (Linnaeus) Lamarck, 1799.

MYA TRUNCATA Linnaeus, 1758.
Syst. Nat., ed. 10, p. 670; Binney's Gould's Inv. Mass., p. 58, fig. 376.
Circumboreal. Arctic Ocean to Bering Island on the west and to Puget Sound on the east.

MYA INTERMEDIA Dall, 1898. **(Plate 4.)**
Trans. Wagner Inst. Sci., vol. 3, pt. 4, p. 857.
Arctic Ocean from Point Barrow to Monterey Bay, California.

Scammon's Lagoon, Hemphill coll.

MYA ARENARIA Linnaeus, 1758.
Syst. Nat., ed. 10, p. 670; Binney's Gould's Inv. Mass., p. 55, fig. 375.
Introduced at San Francisco with "seed" oysters from the Atlantic coast. Spread from Victoria, British Columbia, to Monterey, California.

Genus CRYPTOMYA Conrad, 1849.

CRYPTOMYA CALIFORNICA Conrad, 1837.
Journ. Acad. Nat. Sci. Phila., vol. 7, p. 234, pl. 17, fig. 11.
Chichagoff Island, Alaska, and south to Topolobampo, Mexico.

Genus SPHENIA Turton, 1822.

SPHENIA FRAGILIS Carpenter, 1857.
Mazatlan Cat., p. 24, No. 35.
Oregon to Mazatlan.

SPHENIA OVOIDEA Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 637; Proc. Acad. Nat. Sci. Phila. for 1865, p. 54.
Aleutian Islands to Puget Sound and San Diego.

SPHENIA TRUNCULUS Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 415.
San Diego, California, to Panama.

SPHENIA PHOLADIDEA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 415.
Santa Barbara, California.

SPHENIA GLOBULA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 570.
Monterey, California.

Genus PLATYODON Conrad, 1837.

PLATYODON CANCELLATUS Conrad, 1837.
Journ. Acad. Nat. Sci. Phila., vol. 7, 236, pl. 18, fig. 2.
Baulinas Bay, California, to San Diego, California. Clallam Bay, Fuca Str. Eyerd.

Family CORBULIDAE.

Genus CORBULA Bruguière, 1792.

CORBULA OBESA Hinds, 1843.
Proc. Zool. Soc., p. 57; Zool. *Sulphur's* Voy., Moll., p. 68, pl. 20, fig. 12.
Catalina Island, California, to Panama.

CORBULA FRAGILIS Hinds, 1843.
Proc. Zool. Soc., p. 56; Zool. *Sulphur's* Voy., Moll., p. 68, pl. 20, fig. 11.
Monterey, California, to Salina Cruz, Mexico. Veragua, Hinds.

CORBULA LUTEOLA Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 637; Proc. Cal. Acad. Sci., vol. 3, p. 207.—Arnold, Pal. San Pedro, p. 181, pl. 17, fig. 11.
Monterey, California, to Magdalena Bay. Acapulco, Arnold.

CORBULA PORCELLA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 415.
Santa Rosa Island, California, to Panama.

CORBULA KELSEYI Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 416.
Esteros Bay, to Catalina Island, California.

Genus GRIPPINA Dall, 1912.

GRIPPINA CALIFORNICA Dall, 1912.
Nautilus, vol. 25, No. 11, p. 128.
Off San Diego Bay, California.

Family SAXICAVIDAE.

Genus PANOPE Menard, 1807.

PANOPE GENEROSA Gould, 1850.
Proc. Boston Soc. Nat. Hist., vol. 3, p. 215; Bull. U. S. Fish. Com., vol. 3, No. 23, p. 356, figs. 3—6, 1883.
Puget Sound to San Diego, California.

PANOPE GENEROSA SOLIDA Dall, 1898.
Trans. Wagner Inst., vol. 3, pt. 4, p. 831.
Straits of Fuca to San Francisco Bay.

Genus PANOMYA (Gray) Adams, 1858.

PANOMYA (ARCTICA Lamarck, 1819, ?variety) TURGIDA Dall, 1916. **(Plate 2, fig. 1.)**
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 416.
Unalaska to the Shumagin Islands, Alaska.

PANOMYA BERINGIANA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 415.
Eastern Bering Sea.

PANOMYA AMPLA Dall, 1898.
Trans. Wagner Inst., vol. 3, pt. 4, p. 833; Proc. U. S. Nat. Mus., vol. 24, No. 1264, p. 560, pl. 40, figs. 3, 4.
Arctic Ocean north of Bering Strait, Bering Sea, Aleutian Islands and eastward to Victoria, British Columbia.

Genus SAXICAVELLA Martens, 1885.

SAXICAVELLA PACIFICA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 416.
Off Point Loma, San Diego, 131 fathoms.

Genus CYRTODARIA Daudin, 1799.

CYRTODARIA KURRIANA Dunker, 1862.
Malak. Blätt. 1862, p. 38.—Posselt, Consp. Fauna Grönl., p. 96.
Arctic Ocean and south to Norton Sound, Alaska. Also on the west coast of Greenland.

Forrester Id. Willett. Scammon's Lagoon, Hemphill coll.

Seldovia, Cook's Inlet, Eyerdam.

April, 1861, on signature, 1862 on titlepage.

Rocellaria
San Diego, Cal. Orcutt.

Genus SAXICAVA Fleuriau, 1802.

SAXICAVA ARCTICA Linnaeus, 1767.
Sys. Nat., ed. 12, p. 1113; Thes. Conch., *Saxicava*, pl. 471, fig. 1.—Sars, Moll. Reg. Arct. Norv., pl. 20, figs. 8 *a–b*. (*yo.*).
Arctic Ocean to Panama. Also Atlantic.

SAXICAVA PHOLADIS Linnaeus, 1771.
Mantissa, vol. 2, p. 548.—Sars, Moll. Reg. Arct. Norv., pl. 20, figs. 7 *a–b*.
Arctic Ocean to Panama. Also Atlantic.

Superfamily ADESMACEA.

Family PHOLADIDAE.

Subfamily PHOLADINAE.

Genus BARNEA (Leach) Risso, 1826.

BARNEA PACIFICA Stearns, 1871.
Prel. Descr., Aug. 1871, p. 1; Proc. Cal. Acad. Sci., vol. 5, p. 81, pl. 1, figs. 6, 6 *a–c.*, 1873.
San Francisco Bay to Lower California. Scammon's Lagoon, H. H. coll.

Genus ZIRFAEA (Leach) Gray, 1847.

ZIRFAEA GABBI Tryon, 1863.
Proc. Acad. Nat. Sci. Phila. for 1863, p. 144, pl. 1, fig. 1.
Bering Sea and islands and south to San Diego, California. Scammon's lagoon, H. H.

Subfamily JOUANNETINAE.

Genus PARAPHOLAS Conrad, 1848.

PARAPHOLAS CALIFORNICA Conrad, 1837.
Journ. Acad. Nat. Sci. Phila., vol. 7, p. 236, pl. 18, fig. 5.
Monterey to San Diego, California. Coos Bay, Oregon. Newport, Oregon.

Genus PHOLADIDEA Turton, 1819.

PHOLADIDEA PENITA Conrad, 1837.
Journ. Acad. Nat. Sci. Phila., vol. 7, p. 237, pl. 18, fig. 7. Pt. Abreojos L. Cal.
Chirikoff Islands, Alaska, and south to San Diego, California. Guayaquil.

PHOLADIDEA PENITA CONCAMERATA Deshayes, 1839.
Rev. Zool. Soc. Cuvierienne, p. 324.—Guérin, Mag. Zool. 1840, Moll., pl. 17.
Bering Sea and islands and south to San Diego, California.

PHOLADIDEA PENITA SAGITTA Stearns, 1916.
Proc. U. S. Nat. Mus., vol. 52, No. 2183, p. 417.
Puget Sound to Socorro Island.

PHOLADIDEA MELANURA Sowerby, 1834.
Proc. Zool. Soc., p. 70; Thes. Conch. *Pholas*, pl. 107, figs. 78, 79.
Redondo, California, 40 fathoms. Ecuador.

PHOLADIDEA OVOIDEA Gould, 1851.
Proc. Boston Soc. Nat. Hist., vol. 4, p. 87; Boston Journ. Nat. Hist., vol. 6, p. 388, pl. 15, fig. 1.
Bering Sea and islands and south to the Gulf of California.

PHOLADIDEA PARVA Tryon, 1865.
Amer. Journ. Conch., vol. 1, p. 39, pl. 2, figs. 4, 5.
San Pedro, California, to Lower California, in shells of *Haliotis*.
Bolinas Bay, Wood; S. Francisco Bay, Raymond, Mty. Berry.

Subgenus NETTASTOMELLA Carpenter, 1865.

NETTASTOMELLA ROSTRATA Valenciennes, 1846.
Voy. *Venus*, Atlas, pl. 24, figs. 4, 4*a*.
Puget Sound to San Diego, California.

Genus MARTESIA (Leach) Blainville, 1824.

MARTESIA XYLOPHAGA Valenciennes, 1846.
Voy. *Venus*, Atlas, pl. 24, fig. 2.
San Francisco, California, to Panama.

MARTESIA INTERCALATA Carpenter, 1855.
Mazatlan Cat., No. 19, p. 13.
Farallones Islands to Mazatlan, Mexico.

Genus NAVEA Gray, 1851.

NAVEA SUBGLOBOSA Gray, 1851.
Ann. Mag. Nat. Hist., ser. 2, vol. 8, p. 385.—CHENU, Man., vol. 2, p. 6, figs. 28, 29.
Lobitas to Monterey, California.

Genus XYLOPHAGA Turton, 1822.

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XYLOPHAGA MEXICANA Dall, 1908.
Bull. Mus. Comp. Zool., vol. 43, No. 6, p. 425.
Puget Sound to Acapulco.

Xylophaga washingtona Bartsch, 1921.
Proc. Biol. Soc. Wash. vol. 34, p. 32
Departure Bay, to Washington Coast.

Family TEREDIDAE.

Genus BANKIA Gray, 1842.

BANKIA?, species.
Bering Island, Bering Sea.

BANKIA SETACEA Tryon, 1863.
Proc. Acad. Nat. Sci. Phila., p. 144, pl. 1, figs. 2, 3.
Bering Sea to Gulf of California.

Genus TEREDO Linnaeus, 1758.

TEREDO DIEGENSIS Bartsch, 1916. Subg. Teredops Bartsch, 1922.
Nautilus, vol. 30, No. 4, p. 48. Bull. U. S. N. M. ~~44~~ 122, p. 29, pl. 22, fig. 3, pl. 34, fig. 3, 1922.
San Diego, California, to San Francisco Bay.

Teredo beachi Bartsch, 1921,
Proc. Biol. Soc. Wash. vol. 34, p. 29; Mon. Am. Shipw. p. 18, pl. 20, fig. 1. pl. 37, fig. 4, 1922.
San Francisco Bay.

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* Xylophaga californica Bartsch, 1921,
Proc. Biol. Soc. Wash. vol. 34, p. 32.
Off Pt. Pinos. Cal. 75 to 108 fms.

Class SCAPHOPODA.

Order SOLENOCONCHA.

Family DENTALIIDAE.

Genus DENTALIUM Linnaeus, 1758.

DENTALIUM INVERSUM Deshayes, 1825.
Mem. Soc. Hist. Nat., Paris, vol. 2, p. 270, pl. 16, figs. 21, 22.
Bering Sea to Panama in increasingly deep water.

DENTALIUM NEOHEXAGONUM Sharp and Pilsbry, 1897.
Man. Conch., vol. 17, p. 19, pl. 11, figs. 74–86.
Monterey to Guacomayo, Central America.

DENTALIUM SEMIPOLITUM Broderip and Sowerby, 1829.
Zool. Journ., vol. 4, p. 369.—Pilsbry, Man. Conch., vol. 17, pl. 16, fig. 54.
San Pedro, California, to Mazatlan, Mexico.

DENTALIUM DALLI Pilsbry and Sharp, 1897.
Man. Conch., vol. 17, pl. 21, fig. 46.
Pribilof Islands, Bering Sea, to Point Aguja, Peru.

DENTALIUM RECTIUS Carpenter, 1864.
Suppl. Rep. Brit. Assoc., for 1863, p. 648.—Pilsbry, Man. Conch., vol. 17, pl. 21, fig. 45.
Stephens Passage, Alaska, to Panama Bay.

DENTALIUM WATSONI Sharp and Pilsbry, 1897.
Man. Conch., vol. 17, p. 113, pl. 21, fig. 44.
Tillamook, Oregon, to San Diego, California.

DENTALIUM (OERSTEDTII Mörch, var.?) NUMEROSUM Dall, 1897.
Pilsbry, Man. Conch., vol. 17, p. 25, pl. 10, figs. 70–73.
Coronado Islands and south to Panama and the Galapagos Islands, in deep water.

DENTALIUM AGASSIZII Pilsbry and Sharp, 1897.
Man. Conch., vol. 17, p. 26, pl. 12, figs. 90–94.
Santa Barbara Islands, California, to Panama.

DENTALIUM FISHERI (Stearns) Pilsbry, 1897.
Man. Conch., vol. 17, p. 36, pl. 5, figs. 61–65.
Los Animas Bay, California, to Gulf of California.

DENTALIUM VALLICOLENS Raymond, 1904.
Nautilus, vol. 17, p. 123.
Fuca Strait to Gulf of California.

DENTALIUM PRETIOSUM Sowerby, 1860.
Thes. Conch., p. 95, pl. 225, fig. 57.
Forrester Island, Alaska, to San Diego, California.

Genus SIPHONODENTALIUM M. Sars, 1859.

? SIPHONODENTALIUM QUADRIFISSATUM Pilsbry, 1898.
Man. Conch., vol. 17, p. 150, pl. 29, figs. 10–13.
San Pedro to San Diego, California.

Genus CADULUS Philippi, 1844.

CADULUS FUSIFORMIS Pilsbry and Sharp, 1898.
Man. Conch., vol 17, p. 193, pl. 35, fig. 14.
Monterey, California, to Cape San Lucas.

CADULUS HEPBURNI Dall, 1897.
Bull. Nat. Hist. Soc. Brit. Col., No. 2, p. 12, pl. 1, fig. 13. Prince Wm Sd
Eyerdam.
Victoria, British Columbia, to Monterey, California.

CADULUS CALIFORNICUS Pilsbry and Sharp, 1898.
Man. Conch., p 17, vol. 180, pl. 34, figs. 5–8.
Clarence Strait, Alaska, to Manta, Ecuador.

CADULUS TOLMEI Dall, 1897.
Bull. Nat. Hist. Soc. Brit. Col., No. 2, p. 13, pl. 1, fig. 8.
Vancouver Island to San Quentin Bay, Lower California.

CADULUS PERPUSILLUS Sowerby, 1832.
Proc. Zool. Soc., 1832, p. 29.
Monterey, California, to Panama. Guayaquil,

CADULUS ABERRANS Whiteaves, 1887.
Trans. Roy. Soc. Canada, vol. 4, sec. 4, p. 124, fig. 2.
Quatsino Sound, British Columbia.

CADULUS STEARNSII Pilsbry and Sharp, 1898.
Man. Conch., vol. 17, p. 253, pl. 27, figs. 88, 89.
British Columbia to San Quentin Bay, Lower California.

Class GASTROPODA.

Subclass ANISOPLEURA.

Superorder EUTHYNEURA.

Order PTEROPODA.

Suborder THECOSOMATA.

Family SPIRATELLIDAE.

Genus SPIRATELLA Blainville, 1817.

SPIRATELLA PACIFICA Dall, 1871.
Amer. Journ. Conch., vol. 7, p. 138.
Point Barrow, Arctic Ocean, south to Monterey, California.

Subgenus HETEROFUSUS Fleming, 1823.

HETEROFUSUS, species.
Off Oregon coast, in stomach of salmon.

Monterey, Berry. Coronado Ids. Cooke & Baker.

Family CAVOLINI~~I~~DAE.

Genus CAVOLINA Abildgaard, 1791.

CAVOLINA OCCIDENTALIS Dall, 1908.
Bull. Mus. Comp. Zool., vol. 43, No. 6, p. 233, pl. 12, fig. 1.
Northeast Pacific between latitudes 30° and 54° north.

Genus CLIO Linnae~~u~~s, 1767.

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CLIO EXACUTA Gould, 1852.
U. S. Expl. Exp. Shells, p. 488, pl. 51, fig. 605.
North Pacific Ocean west of Columbia River.

CLIO OCCIDENTALIS Dall, 1871.
Amer. Journ. Conch., vol. 7, p. 140.
Northeast Pacific between latitudes 30° and 50° north.
Off the Farallone Islands in the stomach of *Orthagoriscus mola.*

Genus STYLIOLA Lesueur, 1826.

STYLIOLA FALCATA Gould, 1852.
U. S. Expl. Exp. Shells, p. 490, pl. 51, fig. 608.
Northeast Pacific, west of Oregon.

Genus CRESEIS Rang, 1828.

CRESEIS SUBULA Quoy and Gaimard, 1827.
Ann. Sci. Nat., vol. 13, p. 313, pl. 17, fig. 1.
Warmer waters of the north Pacific.

Family CYMBUL~~L~~IDAE.

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Genus COROLLA Dall, 1871.

COROLLA SPECTABILIS Dall, 1871.
Amer. Journ. Conch., vol. 7, p. 138; Zool. Jahrb., vol. 20, Heft 1, p. 67, pl. 5, 1904.
North Pacific Ocean from Monterey to latitude 43° north. Japan seas.
off Catalina Id.

Suborder GYMNOSOMATA.

Family CLIONIDAE.

Genus CLIONE Pallas, 1774.

CLIONE LIMACINA Phipps, 1773.
Voy. N. Pole, p. 195.—PALLAS, Spic. Zool., pl. 1, figs. 18–19, 1774.
Circumboreal. Northern Bering Sea south to the Pribilof Islands, rarely to the Aleutians.

CLIONE ELEGANTISSIMA Dall, 1871.
Amer. Journ. Conch., vol. 7, p. 139.
South of the Aleutian Islands, in latitude 51° 50′, longitude 161° 26′ west.

Family PNEUMODERMATIDAE.

Genus PNEUMODERMA Péron and Lesueur, 1810.

PNEUMODERMA PACIFICA Dall, 1871.
Amer. Journ. Conch., vol. 7, p. 139, *Challenger* Pteropoda, pl. 2, figs. 4, 5.
Northeast Pacific, off the California coast in latitude 37° and northward to latitude 45°

Family DESMOPTERIDAE.

Genus DESMOPTERUS Chun, 1889.

DESMOPTERUS PACIFICUS Essenberg, 1919.
Univ. of Cal. Pub. Zool., vol. 19, No. 2, p. 85, figs. 1, 2.
Off Southern California.

Order OPISTHOBRANCHIATA.

Suborder TECTIBRANCHIATA.

(CEPHALASPIDEA.)

Family ACTEONIDAE.

Genus ACTEON Montfort, 1810.

ACTEON TRASKI Stearns, 1898.
Proc. U. S. Nat. Mus., vol. 21, No. 1145, p. 298, fig. 1.
San Diego, California, to Panama. Also Pleistocene.

Subgenus RICTAXIS Dall, 1871.

(1) **RICTAXIS PUNCTOCOELATA** Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 646; Amer. Journ. Conch., vol. 7, pl. 15, fig. 12.
Monterey, California, to Magdalena Bay, Lower California.

RICTAXIS PAINEI Dall, 1903. (Plate 3, fig. 5.)
Proc. Biol. Soc. Wash., vol. 16, p. 172.
Catalina Island, California, in 50 fathoms.

Genus MICROGLYPHIS Dall, 1902.

MICROGLYPHIS BREVICULUS Dall, 1902.
Proc. U. S. Nat. Mus., vol. 24, No. 1264, p. 512; Bull. Mus. Comp. Zool., vol. 43, pl. 15, fig. 12.
Monterey, California, to Point San Quentin, Lower California.

MICROGLYPHIS ESTUARINUS Dall, 1908.
Bull. Mus. Comp. Zool., vol. 43, No. 6. p. 238.
Straits of Fuca to Gulf of California.

catalina, Lowe.

1, Departure Bay, B.C.

1. To San Diego, Cal. fide A. M. Strong. Coronado Is.
Baker. San Bartolome Bay, L. Cal. S. Ignacio Lagoon. H.

Acteocina oldroydi Dall Departure Bay, Oldroyd.
Nautilus, vol. 39, no. 1. p. 25, July, 1925.

San Martin Id. L. Cal. Baker.

Family ACTEOCINIDAE.

Genus ACTEOCINA Gray, 1847.

/. **ACTEOCINA CULCITELLA** Gould, 1852.
Boston Journ. Nat. Hist., vol. 6, p. 377, pl. 14, fig. 8.
Kodiak Island, Alaska, south to Puget Sound.

ACTEOCINA EXIMIA Baird, 1863.
Proc Zool. Soc., p. 67.
Kodiak Island, Alaska, south to Puget Sound.

ACTEOCINA SMIRNA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 296.
San Diego, California, to San Salvador.

ACTEOCINA INCULTA Gould, 1856.
Proc. Zool. Soc., p. 203; Man. Conch., vol. 15, pl. 59, fig. 15.
Monterey, California, to Gulf of California.

ACTEOCINA INFREQUENS C. B. Adams, 1852.
Panama Shells, p. 214. fossil; living C. S. Lucas, L. Cal.
Santa Monica, California, ^ to Panama.

ACTEOCINA CARINATA Carpenter, 1857.
Mazatlan Cat., p. 171.
San Diego, California, to Gulf of California. To Panama, fide Zetek.

ACTEOCINA PLANATA Carpenter, 1865.
Journ. de Conchyl., vol. 13, p. 139.
San Diego, California.

Genus RETUSA Brown, 1827.

RETUSA SEMEN Reeve, 1856.
Last of the Arctic Voy., vol. 2, p. 393, pl. 32, fig. 4.
Off Point Collinson, Arctic Ocean. Also Atlantic. Prince Wm. Sound. Eyerdam

RETUSA OBTUSA Montagu, 1803.
Test. Brit., vol. 1, p. 223, pl. 7, fig. 3.
Arctic Ocean to St. Mathew Island. Circumboreal.

RETUSA PERTENUIS Mighels, 1843.
Boston Journ. Nat. Hist., vol. 4, p. 346, pl. 16. fig. 3.
Arctic Ocean; Bering Sea (Krause). Also Atlantic.

Section COLEOPHYSIS Fischer, 1883.

RETUSA HARPA Dall, 1871.
Amer. Journ. Conch., vol. 7, p. 136, pl. 15, fig. 11. Prince Wm. Sound
Queen Charlotte Islands, British Columbia, to San Diego, California.

Section SULCULARIA Dall, 192~~0~~. 1/

RETUSA XYSTRUM Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 297.
San Pedro to San Diego, California.

Genus VOLVULELLA Newton, 1891.

4/ **VOLVULELLA CYLINDRICA Carpenter, 186~~5~~.**
Suppl. Rep. Brit. Assoc., p. 647; Ann. Mag. Nat. Hist., ser. 3, vol. 15, p. 179, 1865.
Vancouver Island south to Gulf of California.

VOLVULELLA COOPERI Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 297.
Point Sur, California, to Scammon Lagoon, Lower California.

VOLVULELLA CALIFORNICA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 298.
Santa Rosa Island to San Diego, California.

Family SCAPHANDRIDAE.

Genus SCAPHANDER Montfort, 1810.

SCAPHANDER WILLETTI Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 299.
Forrester Island, Alaska.

Genus ATYS Montfort, 1810.

ATYS CASTA Carpenter, 1864.
Ann. Mag. Nat. Hist., ser. 3, vol. 13, p. 314.
Catalina Island to Gulf of California.

ATYS NONSCRIPTA A. Adams, 1850.
Thes. Conch., p. 588, pl. 125, fig. 125.
San Diego, California (Carpenter).

Family Diaphanidae

Genus DIAPHANA Brown, 1827.

DIAPHANA BRUNNEA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 299.
Kodiak Island, Alaska.

DIAPHANA CALIFORNICA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 299.
San Pedro, California, to South Coronado Island.

DIAPHANA GLOBOSA Lovèn, 1846.
Index Moll. Scand., p. 11.—Sars, Moll. Reg. Arct. Norv., pl. 18, fig. 4.
Bering Strait and Arctic Ocean. Circumboreal (Krause).

Genus BROCKTONIA Iredale, 1915.

BROCKTONIA POLYSTRIGMA Dall, 1908.
Proc. U. S. Nat. Mus., vol. 34, p. 246.
San Diego, California.

Pt. Lobos. Monterey Bay, on Haliotis. C. E. White.

Genus CYLICHNELLA Gabb, 1872.

Subgenus Bullinella Newton, 1891.

BULLINELLA ALBA Brown, 1827.
Ill. Conch. Gt. Brit., p. 3, pl. 19, figs. 43, 44.
Circumboreal. Arctic Ocean to Monterey. Also Pleistocene of San Diego, California.

BULLINELLA NUCLEOLA Reeve, 1855.
Last of the Arctic Voy., vol. 2, p. 393, pl. 32, fig. 2.
Grantley Harbor, Port Clarence, Bering Strait. Circumboreal.

BULLINELLA OCCULTA Mighels, 1841.
Proc. Boston Soc. Nat. Hist., vol. 1, p. 50; Boston Journ. Nat. Hist., vol. 4, pl. 4, fig. 11.
Circumboreal. Point Barrow to Aleutian Islands.

BULLINELLA DIEGENSIS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 300.
San Diego, California, to Cape San Lucas. Vancouver Island?

BULLINELLA ATTONSA Carpenter, 1865.
Proc. Acad. Nat. Sci. Phila., p. 58.
San Diego, California.

Family BULLARIIDAE.

Genus BULLARIA Rafinesque, 1815.

BULLARIA GOULDIANA Pilsbry, 1893.
Man. Conch., vol. 15, p. 340, pl. 36, figs. 22–24.
Santa Barbara, California, to Mazatlan, Mexico.

BULLARIA QUOYANA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 300; Man. Conch., vol. 15, pl. 37, fig. 39.
Catalina Island, California, to Acapulco, Mexico.

Family AKERIDAE.

Genus HAMINOEA Turton, 1830.

HAMINOEA VIRESCENS Sowerby, 1833. = dalli Bartsch, MS.
Genera of Shells, *Bulla*, fig. 2.
Santa Barbara, California, to Puerto Libertad, Mexico. Fossil S. Pedro.

HAMINOEA VESICULA Gould, 1855.
Pacific R. R. Surveys, vol. 5, app. p. 334, pl. 5, fig. 29.
Vancouver Island to Gulf of California. Fossil, S. Pedro.

HAMINOEA OLGAE Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 300. Prince Wm Sound, Eyerdam
Olga, Washington, to San Quentin Bay, Lower California.

Family PHILINIDAE.

Genus PHILINE Ascanius, 1772.

PHILINE SINUATA Stimpson, 1850.
Shells of New England, p. 51, pl. 1, fig. 7.
Port Clarence, Bering Strait; (Krause). Also Atlantic.

PHILINE POLARIS Aurivillius, 1885.
Vega Exp. Arb., vol. 4, p. 380, pl. 12, figs. 21, 22; pl. 13, fig. 18.
Arctic Sea to Nanaimo, British Columbia.

PHILINE BAKERI Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 300.
Off the South Coronado Island near San Diego, California.

Family GASTROPTERIDAE.

Genus GASTROPTERON Kosse, 1813.

GASTROPTERON PACIFICUM Bergh, 1893.
Zool. Jahrb., vol. 7, p. 303, pl. 16, fig. 28.
Aleutian Islands to Fuca Strait.

Family AGLAJIDAE.

Genus AGLAJA Renier, 1804.

AGLAJA PURPUREA Bergh, 1894.
Bull. Mus. Comp. Zool.. vol. 25, p. 209, pl. 12, fig. 7.
Catalina Island, California.

AGLAJA DIOMEDEA Bergh, 1894.
Bull. Mus. Comp. Zool., vol. 25, p. 211, pl. 11, fig. 1.
Shumagin and Kodiak Islands, Alaska.

AGLAJA OCELLIGERA Bergh, 1894.
Bull. Mus. Comp. Zool., vol. 25, p. 212, pl. 10, fig. 10.
Sitka Harbor, Alaska.

AGLAJA ADELLAE Dall, 1894.
Nautilus, vol. 8, p. 73; Man. Conch., vol. 16, pl. 9, figs. 17–22.
Eagle Harbor, Puget Sound, in 20 fathoms.

Genus NAVANAX Pilsbry, 1895.

NAVANAX INERMIS Cooper, 1862.
Proc. Cal. Acad. Sci., vol. 2, p. 202; Man. Conch., vol. 16, pl. 15, figs. 89–93.
Catalina Island to San Diego, California.

(ANASPIDEA.)

Family APLYSIIDAE.

Genus TETHYS Linnaeus, 1758.

Section NEAPLYSIA Cooper, 1863.

TETHYS CALIFORNICA Cooper, 1863.
Proc. Cal. Acad. Sci., vol. 3, p. 57, fig. 14.
Monterey to San Pedro, California. San Diego, Baker.

TETHYS RITTERI Cockerell, 1901.
Nautilus, vol. 15, p. 90.
San Pedro, California.

(NOTASPIDEA.)

Family TYLODINIDAE.

Genus TYLODINA Rafinesque, 1819.

TYLODINA FUNGINA Gabb, 1865. (Plate 15, figs. 15, 16, 17.)
Proc. Cal. Acad. Sci., vol. 3, p. 188.
Santa Barbara Islands, San Pedro, and San Diego, California.

Family PLEUROBRANCHIDAE.

Genus PLEUROBRANCHUS Cuvier, 1804.

PLEUROBRANCHUS CALIFORNICUS Dall, 1900.
Nautilus, vol. 14, p. 92.
San Pedro to San Diego, California.

PLEUROBRANCHUS DIGUETI Rochebrune, 1895.
Bull. Mus. Hist. Nat. Paris, p. 240; Man. Conch., vol. 16, pl. 54, figs. 98, 99, 1, 2.
San Pedro, California, to Gulf of California.

Order NUDIBRANCHIATA.

(Omitted.)

[For data on this group see Cooper and Stearns in Proceedings of the California Academy of Sciences; Macfarland in Proceedings of the Biological Society of Washington, 1905, in the Bulletin of the United States Bureau of Fisheries, 1905, and the Nautilus, June, 1908; also Bergh in Proceedings of the Academy of Natural Sciences, Philadelphia, 1879–80, and other papers.]

Order PULMONATA.

Suborder BASOMMATOPHORA.

Superfamily AKTEOPHILA.

Family ELLOBIIDAE.

Genus PHYTIA Gray, 1821.

PHYTIA SETIFER Cooper, 1872.
Proc. Cal. Acad. Sci., vol. 4, p. 172.
Humboldt Bay to San Francisco Bay. San Pedro, Chase.

Genus PEDIPES Scopoli, 1777.

PEDIPES UNISULCATUS Cooper, 1866.
Proc. Cal. Acad. Sci., vol. 3. p. 294, fig. 29.
San Pedro, California, to the Gulf of California.

PEDIPES LIRATUS Binney, 1860.
Proc. Acad. Nat. Sci., Phila., p. 154; Proc. U. S. Nat. Mus., vol. 8, p. 279, pl. 18, fig. 5.
San Diego, California, to the Gulf of California.

Genus MELAMPUS Montfort, 1810.

MELAMPUS OLIVACEUS Carpenter, 1856.
Mazatlan Cat., p. 178; Proc. U. S. Nat. Mus., vol. 8, pl. 18, fig. 16.
Monterey Bay (Salinas River) to Mazatlan, Mexico.

Superfamily PETROPHILA.

Family GADINIIDAE.

Genus GADINIA Gray, 1824.

GADINIA RETICULATA Sowerby, 1835.
Proc. Zool. Soc., p. 6; Amer. Journ. Conch., vol. 6, pl. 2, 4, 1870.
Trinidad and Farallones Islands to Cape San Lucas.

Family SIPHONARIIDAE.

Genus SIPHONARIA Sowerby, 1824.

Subgenus Liriola Dall, 1870.

LIRIOLA THERSITES Carpenter, 1864.
m/. Ann. Mag. Nat. Hist., vol. 14, p. 425; Amer. Journ. Conch., vol. 6, pl. 4, fig. 8; pl. 5, fig. 2, 1870.
Aleutian Islands to the Strait of Fuca.

Subgenus KERGUELENIA Rochebrune and Mabille, 1889.

KERGUELENIA BRANNANI Stearns, 1872. **(Plate 15, figs. 13, 14.)**
Proc. Cal. Acad. Sci., vol. 4, p. 249, pl. 1, fig. 4.
Santa Barbara and Santa Catalina Islands; Laguna Beach, California.
San Diego, Baker.

Genus WILLIAMIA Monterosato, 1884.

WILLIAMIA VERNALIS Dall, 1870.
Amer. Journ. Conch., vol. 6, p. 37, pl. 4, figs. 11 *a–b*, 1870; Journ. de Conch., vol. 26, p. 70.
Crescent City to San Nicolas Island, and La Jolla, California. Fossil, S. Pedro.

WILLIAMIA PELTOIDES Carpenter, 1864. **(Plate 15, figs. 10, 12.)**
Ann. Mag. Nat. Hist., vol. 50, p. 474.
Catalina Island to Gulf of California.

Suborder STYLOMMATOPHORA

Superfamily DITREMATA.

Family ONCHIDIIDAE.

Genus ARCTONCHIS Dall, 1905.

ARCTONCHIS BOREALIS Dall, 1871.
Amer. Journ. Conch., vol. 7, p. 135; Proc. Acad. Nat. Sci. Phila., 1876, pl. 6, fig. E.
Port Moller and Aleutian Islands to northern California.

Superorder STREPTONEURA.

Order CTENOBRANCHIATA.

Suborder ORTHODONTA.

Superfamily TOXOGLOSSA.

Family TEREBRIDAE.

Genus TEREBRA (Bruguière, 1789) Lamarck, 1799.

Subgenus STRIOTEREBRUM Sacco, 1891.

STRIOTEREBRUM PEDROANUM Dall, 1908.
Bull. Mus. Comp. Zool., vol. 43, No. 6, p. 251.
San Pedro and San Diego, California.

STRIOTEREBRUM PEDROANUM PHILIPPIANUM Dall, 1920.
CARPENTER, Ann. Mag. Nat. Hist., ser. 3, vol. 15, p. 394, 1865. (*Simplex* Carpenter, not Conrad, 1830.)
San Pedro, California, to head of Gulf of California.

Family CONIDAE.

Genus CONUS Linnaeus, 1758.

CONUS CALIFORNICUS Hinds, 1844. (Plate 14, fig. 9.)
Zool. Voy. *Sulphur*, Moll. p. 6, pl. 1, figs. 3–5.
Farallones Islands, California, to Ballenas Lagoon, Lower California.

Family TURRITIDAE.

Subfamily TURRITINAE.

Genus CRYPTOCONUS von Koenen, 1867.

CRYPTOCONUS TRYONIANUS Gabb, 1866.
Pal. Cal., vol. 2, p. 6, pl. 1, fig. 9.
San Pedro, California, to Todos Santos Bay, Lower California.

CRYPTOCONUS CARPENTERIANUS Gabb, 1865.
Proc. Cal. Acad. Sci., vol. 3, p. 183; Pal. Cal., vol. 2, pl. 1, fig. 8.
Bodega Bay to San Pedro. Fossil at San Diego, California.

CRYPTOCONUS TREMPERIANUS Dall, 1911. (Plate 12, fig. 5.)
Nautilus, vol. 24, No. 10, p. 109.
Point Ano Nuevo, California, to Cerros Island.

CRYPTOCONUS STEARNSIANUS Raymond, 1904.
Nautilus, vol. 18, p. 1.
Monterey to San Diego, California.

Genus AFORIA Dall, 1889.

AFORIA CIRCINATA Dall, 1873. (Plate 11, fig. 6.)
Proc. Cal. Acad. Sci., vol. 5, p. 61, pl. 2. fig. 5.
Bering Sea (lat. 62° 29′) to Fuca Strait.

Genus LEUCOSYRINX Dall, 1889.

LEUCOSYRINX KINCAIDI Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2288, p. 6, pl. 2, fig. 8.
Shelikoff Strait, Alaska.

LEUCOSYRINX AMYCUS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 53, p. 5, pl. 3, fig. 7.
Off Monterey, California, in 871 fathoms.

LEUCOSYRINX PERSIMILIS Dall, ~~1908.~~ 1889,
Bull. Mus. Comp. Zool., vol. 43, No. 6, p. 271, pl. 12, fig. 2.
Abyssal, eastern Pacific.

LEUCOSYRINX PERSIMILIS BLANCA Dall, 1919.
Proc U. S. Nat. Mus., vol. 56, p. 5.
Off Cape Blanco, Oregon, in 1,064 fathoms.

LEUCOSYRINX PERSIMILIS LEONIS Dall, 1908.
Bull. Mus. Comp. Zool., vol. 43, p. 272.
Off Sealion Rock, Washington, to Cortez Bank, California, in deep water.

San Martin Id. L. Cal. Baker.

San Diego, Gripp + Baker. Blanco Bay, L. Cal. Baker.

Proc. U. S. N. Mus. vol. 12. p. 301, pl. 6. f. 3, 1889.

Genus IRENOSYRINX Dall, 1889.

IRENOSYRINX PACIFICA Dall, 1908.
Bull. Mus. Comp. Zool., vol. 43, No. 6, p. 270, pl. 12, fig. 3.
Southwest of Sitka, Alaska, in 1,569 fathoms.

? IRENOSYRINX CREBRISTRIATA Dall, 1908.
Bull. Mus. Comp. Zool., vol. 43, p. 272, pl. 13, fig. 10.
Southwest of Sitka, Alaska, in 1,569 fathoms.

Genus CYMATOSYRINX Dall, 1889.

Subgenus ELAEOCYMA Dall, 1917.

ELAEOCYMA JOHNSONI Arnold, 1903.
Pal. San Pedro, p. 206, pl. 8, fig. 17.
San Pedro, California. Pleistocene.

ELAEOCYMA EMPYROSIA Dall, 1899.
Nautilus, vol. 12, p. 127; Proc. U. S. Nat. Mus., vol. 56, pl. 4, fig. 1.
San Pedro to San Diego, California.

ELAEOCYMA HEMPHILLI Stearns, 1871.
Proc. Cal. Acad. Sci., vol. 5, p. 80, pl. 1, fig. 3.
Santa Barbara to the Gulf of California.

ELAEOCYMA HALOCYDNE Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 11, pl. 4, fig. 4.
San Pedro and the Santa Barbara Islands, California.

Genus CLATHRODRILLIA Dall, 1918.

CLATHRODRILLIA RENAUDI Arnold, 1903.
Pal. San Pedro, p. 208, pl. 8, fig. 5.
San Pedro, California. Also Pleistocene.

Section CARINODRILLIA Dall, 1911.

CLATHRODRILLIA, species.
Off Santa Rosa Island, California, in 53 fathoms.

Subgenus SUAVODRILLIA Dall, 1918.

SUAVODRILLIA KENNICOTTII Dall, 1871. (Plate 11, fig. 7.)
Amer. Journ. Conch., vol. 7, p. 102, pl. 16, fig. 2.
Bering Strait south to the Aleutian Islands.

? SUAVODRILLIA WILLETTI Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 29.
Forrester Island, Alaska.

Subgenus MONILIOPSIS Conrad, 1865.

MONILIOPSIS GRIPPI Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 27, pl. 8, fig. 2.
San Diego, California.

MONILIOPSIS INCISA Carpenter, 1865.
Proc. Acad. Nat. Sci. Phila., p. 62; Proc. U. S. Nat. Mus., vol. 56, pl. 12, fig. 7.
Puget Sound to San Pedro, California.

MONILIOPSIS INCISA OPHIODERMA Dall, 1908.
Proc. U. S. Nat. Mus., vol. 34, p. 247.—Hinds, Voy. *Sulphur*, Zool., pl. 5, fig. 7, 1844.
Baulinas Bay, California, to Ballenas Lagoon, Lower California.

MONILIOPSIS RHINES Dall, 1908.
Proc. U. S. Nat. Mus., vol. 34, p. 248; vol. 56, pl. 8, fig. 5, 1919.
Puget Sound to San Diego, California.

MONILIOPSIS HALCYONIS Dall, 1908.
Proc. U. S. Nat. Mus., vol. 34, p. 248; vol. 56, pl. 8, fig. 1, 1919.
Burrard Inlet to San Diego, California.

MONILIOPSIS FANCHERAE Dall, 1903. **(Plate 6, fig. 3.)**
Proc. Biol. Soc. Wash., vol. 16, p. 172; Proc. U. S. Nat. Mus., vol. 56, pl. 8, fig. 3, 1919.
Santa Rosa Island, California, to Point Abreojos, Lower California

Genus PSEUDOMELATOMA Dall, 1918.

PSEUDOMELATOMA MOESTA Carpenter, 1865.
Ann. Mag. Nat. Hist., ser. 3, vol. 15, p. 399.—Tryon, Man., vol. 6, pl. 12, fig. 38.
Monterey, California, to Cerros Island, Lower California.

PSEUDOMELATOMA TOROSA Carpenter, 1865.
Journ. de Conchyl., vol. 13, p. 145.—Tryon, Man., vol. 6, pl. 14, fig. 93,
Monterey, California, to Scammon Lagoon, Lower California.

4 **PSEUDOMELATOMA TOROSA AURANTIA Carpenter, 1865.**
Journ. de Conchyl., vol. 13, p. 145. Suppl. Rep. B. Assoc. p. 657.
Monterey to San Diego, Cal.

Genus CRASSISPIRA Swainson, 1840.

CRASSISPIRA MONTEREYENSIS Stearns, 1871.
Proc. Cal. Acad. Sci., vol. 5, p. 80, pl. 1, fig. 2.
Monterey, California, to Mazatlan, Mexico.

Genus CRYPTOGEMMA Dall, 1917.

CRYPTOGEMMA PERNODATA Dall, 1908.
Bull. Mus. Comp. Zool., vol. 43, p. 266.
Tillamook Bay, Oregon, to Tehuantepec in deep water.

CRYPTOGEMMA CALYPSO Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 31, pl. 9, fig. 8.
Off San Diego, California, in 822 fathoms.

CRYPTOGEMMA HERILDA Dall, 1908.
Bull. Mus. Comp. Zool., vol. 43, p. 266.
Santa Barbara, California, to Panama in deep water.

Proc. U.S. nat. mus. XXIV, p. 513, pl. 34, fig. 8. 1902. L. Cal.

smithi Arnold, not Forbes 1921

CRYPTOGEMMA CYMOTHOË Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 31, pl. 9. fig. 3.
Santa Barbara Islands to San Diego, California, in deep water.

CRYPTOGEMMA POLYCASTE Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 30, pl. 9, figs. 4, 7.
Off Tillamook, Oregon, in 786 fathoms, to Gulf of California.

CRYPTOGEMMA CHRYSOTHEMIS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 31, pl. 11, fig. 2.
Between Santa Catalina and San Clemente Islands, in 704 fathoms, and off North Coronado Island, in 656 fathoms.

CRYPTOGEMMA ADRASTIA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 33, pl. 19, fig. 2.
Monterey to San Diego, California, in deep water.

CRYPTOGEMMA EIDOLA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 301.
Off San Diego, California, in 312 to 822 fathoms.

CRYPTOGEMMA (young).
Off Santa Barbara, California, in 638 fathoms.

CRYPTOGEMMA OREGONENSIS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 301.
Off Tillamook Bay, Oregon, in 786 fathoms.

Genus ANTIPLANES Dall, 1902.

ANTIPLANES PERVERSA Gabb, 1865.
Proc. Cal. Acad. Sci., vol. 3, p. 183; Pal. Cal., vol. 2. p. 6, pl. 1, fig. 10, 1866.
Forrester Island, Alaska, to San Diego and Cortez Bank.

ANTIPLANES VINOSA Dall, 1874.
Proc. Cal. Acad. Sci., vol. 5, p. 253; Proc. U. S. Nat. Mus., vol. 24, pl. 34, fig. 1, 1902.
Bering Sea to San Diego, California.

ANTIPLANES KAMCHATICA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 33, pl. 10, fig. 1.
Southwestern Bering Sea in 48 to 100 fathoms.

ANTIPLANES CATALINAE Raymond, 1904.
Nautilus, vol. 18, p. 2.
Esteros Bay to San Diego, California.

ANTIPLANES ROTULA Dall, 1919.
Arnold, Pal. San Pedro, 1903, p. 216, pl. 6, fig. 13.
Forrester Island, Alaska, to San Diego, California. Fossil at San Pedro.

ANTIPLANES SANTAROSANA Dall, 1902. **(Plate 1, fig. 8.)**
Proc. U. S. Nat. Mus., vol. 24, p. 515; vol. 56, pl. 11, fig. 3.
Off Santa Rosa Island. Point Sur. to San Diego, California.

ANTIPLANES DIAULAX Dall, 1908.
Proc. U. S. Nat. Mus., vol. 34, p. 247.
Off Coronado Islands.

ANTIPLANES HYPERIA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 35, pl. 9, fig. 6.
Off Drake's Bay and the Coronado Islands.

ANTIPLANES ABARBAREA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 35, pl. 9, fig. 5.
Cape Martin to Cortez Bank, California.

ANTIPLANES BRISEIS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 35, pl. 22, fig. 1.
Drake's Bay to Coronado Islands.

ANTIPLANES THALAEA Dall, 1902. (Plate 1, fig. 9.)
Proc. U. S. Nat. Mus., vol. 24, p. 514; vol. 56, pl. 11, fig. 6.
Unimak Pass, Aleutian Islands, to San Diego, California.

ANTIPLANES BULIMOIDES Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 34, pl. 11, fig. 7.
Bowers Bank, Bering Sea.

ANTIPLANES BERINGI Aurivillius, 1885.
Vega Exp. Zool. Arb., vol. 4, p. 354, pl. 13, fig. 3.
Bering Sea south of St. Lawrence Island to the Aleutians and eastward to the Shumagin Islands.

ANTIPLANES LITUS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 34, pl. 11, fig. 1.
Coast of Washington to Esteros Bay, California.

ANTIPLANES AMPHITRITE Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 37, pl. 9, fig. 1.
Off Santa Barbara Island, California, in 638 fathoms.

ANTIPLANES AMPHITRITE BEROË Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 37.
Off San Diego, California, in 822 fathoms.

ANTIPLANES ANTIGONE Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 32, pl. 11, fig. 4.
Off San Diego, California, in 822 fathoms.

ANTIPLANES AGAMEDEA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 33, pl. 24, fig. 2.
Off Cape San Quentin in 359 fathoms.

ANTIPLANES AMYCUS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 36, pl. 11, fig. 5.
Monterey Bay, in 581 fathoms.

Genus BORSONELLA Dall, 1908.

BORSONELLA OMPHALE Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 38, pl. 12, fig. 4.
Off Point Loma, California, in deep water.

BORSONELLA DALLI Arnold, 1903.
Pal. San Pedro, p. 201, pl. 6, fig. 2.
Drake's Bay, California, to Coronado Islands, also Pleistocene of San Pedro.

BORSONELLA CORONADOI Dall, 1908.
Bull. Mus. Comp. Zool., vol. 43, p. 277, pl. 14, fig. 2.
San Clemente Island, California, to the Coronado Islands.

BORSONELLA DIEGENSIS Dall, 1908.
Bull Mus. Comp. Zool., vol. 43, p. 275, pl. 13, fig. 11.
Off San Diego, Panama, Ecuador, and the Galapagos Islands, in deep water.

BORSONELLA BARBARENSIS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 37, pl. 12, fig. 6.
Off Santa Barbara Islands, in 414 fathoms.

BORSONELLA RHODOPE Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 39, pl. 12, fig. 3.
Off Santa Rosa Island in 82 fathoms and San Diego in 633 fathoms.

BORSONELLA BARTSCHI Arnold, 1903.
Pal. San Pedro, p. 200, pl. 5, fig. 7, pl. 9, fig. 1.
San Pedro to San Diego, California, also Pleistocene.

BORSONELLA NICOLI Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 39, pl. 12, fig. 1.
Off Point Loma, California, in deep water.

BORSONELLA CIVITELLA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 302.
Off Point Loma, California, in deep water.

BORSONELLA NYCHIA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 38, pl. 12, fig. 2.
Off Point Loma, California, in 101 fathoms.

Genus LORA Gistel, 1848.

LORA SCALARIS Moller, 1842.
Index Moll. Grönl., p. 12.—G. O. SARS. Norv., pl. 23, fig. 5, 1878.
Bering Sea to Sitka, Alaska. Circumboreal.

LORA IMPRESSA Mörch, 1869.
Mem. Soc. Mal. Belg., vol. 4, p. 21.—LECHE, Novaia Zeml. Exp., Moll., pl. 1, fig. 16.
Sea Horse Islands, Arctic Ocean to Kodiak Island, Alaska. Circumboreal.

LORA INEQUITA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 44, pl. 16, fig. 9.
Plover Bay, Bering Strait, to Boca de Quadra, Alaska.

LORA KYSKANA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 47, pl. 14, fig. 3.
Kyska Island, Aleutians, to Puget Sound.

LORA QUADRA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 46, pl. 15, fig. 2.
Unalaska, Aleutian Islands, to Puget Sound.

LORA ALTHORPENSIS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 49, pl. 16, fig. 11.
Granite Cove, Port Althorp, Alaska.

LORA PRIBILOVA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 44, pl. 16, fig. 3.
Cape Lisburne, Arctic Ocean, to Esteros Bay, California.

LORA PITYSA Dall, 1919.
Proc. U. S. Nat Mus., vol. 56, p. 40, pl. 16, fig. 7.
Off Point Pinos to San Diego, California.

LORA BABYLONIA Dall, 1919.
Proc. Biol. Soc., Wash., vol. 32, p. 250.
Off Tillamook, Oregon.

LORA MAURELLEI Dall and Bartsch, 1910.
Canada Geol. Surv. Mem. No. 1143, p. 10, pl. 1, fig. 5.
Barkley Sound, Vancouver Island.

LORA GRIPPII Dall, 1908. **(Plate 3, fig. 8.)**
Nautilus, vol. 21, p. 137.
Catalina Island, California, to Todos Santos Bay, Lower California.

LORA PLEUROTOMARIA Couthouy, 1838.
Boston Journ. Nat. Hist., vol. 2, p. 107, pl. 1, fig. 9.
Nunivak Island, Bering Sea, to Puget Sound. Also Atlantic.

LORA EXARATA Moller, 1842.
Index Moll. Grönl., p. 12.—G. O. Sars, Moll. Reg. Arct. Norv., pl. 16, fig. 18, 1878.
Arctic Ocean to Monterey, California (581 fathoms). Circumboreal.

LORA TABULATA Carpenter, 1865.
Ann. Mag. Nat. Hist., ser. 3, vol. 15, p. 29; Proc. U. S. Nat. Mus., vol. 56, pl. 14, fig. 1, 1919.
Sitka, Alaska, to Monterey, California.

LORA REGULUS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 48, pl. 15, fig. 1.
Off Point Reyes, California, in 61 fathoms.

LORA MIONA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 47, pl. 14, fig. 2.
Boca de Quadra, Alaska, to Point Reyes, California.

LORA FIDICULA Gould, 1849.
Proc. Boston Soc. Nat. Hist., vol. 3, p. 141; Rep. U. S. Expl. Exp. Moll., fig. 284, 1852.
Aleutian Islands to Bellingham Bay.

LORA TENUICOSTATA M. Sars, 1868.
Norske Vid. Selsk. Forh., p. 259.—G. O. Sars, Moll. Reg. Arct. Norv., pl. 17, fig. 1, 1878.
St. Lawrence and Nunivak Islands, Bering Sea, to Safety Cove, Alaska. Also Atlantic.

LORA FIORA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 302.
Adakh Island, Aleutians, to Sitka, Alaska.

Pt. Vincente. Chace,

LORA LOTTA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 47, pl. 14, fig. 4.
Queen Charlotte Islands, British Columbia, to San Diego, California.

LORA SIXTA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 49, pl. 16, fig. 12.
Off San Diego, California, in 359 to 822 fathoms.

LORA COLPOICA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 50, pl. 16, fig. 2.
Tillamook Bay, Oregon.

LORA TENUISSIMA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 49, pl. 15, fig. 5.
Chernoffski Harbor, Unalaska, in 109 fathoms.

LORA CASENTINA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 302.
Off Point Pinos, California, in 871 fathoms.

LORA GALGANA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 303.
Unalaska, Aleutian Islands, in 351 fathoms.

LORA HARPA Dall, 1884.
Proc. U. S. Nat. Mus., vol. 7, p. 523; vol. 9, pl. 4, fig. 2, 1886.
Arctic Ocean to Queen Charlotte Islands. Circumboreal.

LORA ALBRECHTI Krause, 1885.
Arch. f. Naturg, vol. 51, p. 276, pl. 18, figs. 3, 11.
Plover Bay, Bering Strait, to Port Etches, Alaska.

LORA KRAUSEI Dall, 1886.
Proc. U. S. Nat. Mus., vol. 9, p. 301, pl. 4, fig. 4.
Port Etches, Alaska.

LORA LÜTKENI Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 48, pl. 16, fig. 5.
Port Etches, Alaska.

LORA LUTKEANA Krause, 1886.
Arch f. Naturg. vol. 56, p. 281, pl. 18, figs. 6, 16.
St. Lawrence Bay, Bering Strait.

LORA INCISULA Verrill, 1882.
Cat. Mar. Moll. N. Engl., p. 461, pl. 43, fig. 12; pl. 57, fig. 14.
St. Lawrence Bay, Bering Strait (Krause). Also Atlantic.

LORA NOBILIS Moller, 1842.
Index Moll. Grönl., p. 12.—G. O. Sars, Moll. Reg. Arct. Norv., pl. 16, figs. 19, 20, 1878.
Arctic Ocean to Bering Sea, off Akutan Pass, in 60 fathoms. Circumboreal (Krause).

LORA METSCHIGMENSIS Krause, 1886.
Arch. f. Naturg., vol. 51, p. 276, pl. 18, figs. 2, 10.
Metchigme Bay, Bering Strait.

LORA BICARINATA Couthouy, 1833.
Boston Journ. Nat. Hist., vol. 2, p. 104, pl. 1, fig. 11.
Bering Sea near St. Lawrence Island, 55 fathoms (Aurivillius). Circumboreal.

LORA BICARINATA EXSERTA Aurivillius, 1885.
Vega Exp. Vet. Arb., vol. 4, p. 376.
Arctic Ocean, north of Bering Strait.

LORA MÖRCHI Leche, 1878.
K. Svensk. Vet. Akad. Handl., vol. 16, p. 57, pl. 1, fig. 18.
Novaia Zemlia, Arctic Ocean, to Bering Strait. Prince Wm Sound,

LORA ELEGANS Moller, 1842.
Index Moll. Grönl., p. 13.
Blizhni Islands to St. Lawrence Island, Bering Sea (Aurivillius). Circumboreal.

LORA NOVAIASEMLIENSIS Leche, 1878.
K. Svensk. Vet. Akad. Handl., vol. 16, p. 53, pl. 1, fig. 15.
Kara Sea, Arctic Ocean to north of Bering Strait.

LORA WOODIANA Moller, 1842.
Index Moll. Grönl., p. 13.
Sea/ White Island, Arctic Ocean to St. Lawrence Island, Bering ~~Strait.~~ Circumboreal (Aurivillius).

LORA HARPULARIA Couthouy, 1838.
Boston Journ. Nat. Hist., vol. 2, p. 103, pl. 1, fig. 10.
Point Belcher, Arctic Ocean, to Puget Sound. Circumboreal.

LORA NAZANENSIS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 45, pl. 15, fig. 3.
Norton Sound, Alaska, to the Aleutian Islands.

LORA SURANA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 45, pl. 14, fig. 6.
Off Point Sur and Point Pinos, California.

LORA MONTEREALIS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 46, pl. 15, fig. 9.
Monterey Bay, 581 fathoms.

LORA DIEGENSIS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 46, pl. 16, fig. 10.
Off La Jolla, California, to Cape San Quentin, Lower California.

LORA AMIATA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 303.
Off Belkoffski, Alaska, in 15 to 75 fathoms.

LORA SANCTA-MONICAE Arnold, 1903.
Pal. San. Pedro, p. 210, pl. 8, fig. 141.
Santa Monica, California. Pleistocene.

LORA TURRICULA Montagu, 1803.
Test. Brit., p. 262, pl. 3, fig. 17.
Icy Cape, Arctic Ocean, to Puget Sound. Circumboreal.

Prince Wm. Sound, Eyerdam. 10 fms.

LORA PAVLOVA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 43, pl. 14, fig. 9.
Off the Pribilof Islands in 987 fathoms.

LORA ALITAKENSIS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 43, pl. 15, fig. 7.
Unimak Island to Alitak Bay, Kodiak, Alaska.

LORA SOLIDA Dall, 1886.
Proc. U. S. Nat. Mus., vol. 9, p. 301, pl. 3, fig. 4.
Bering Strait to Puget Sound.

LORA RASSINA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 303.
Off Bristol Bay, Bering Sea.

LORA POPOVIA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 42, pl. 14, fig. 8.
Bristol Bay, Bering Sea, and south to Point Pinos, California, in progressively deeper water.

LORA RUGULATA SPITSBERGENSIS Friele, 1886.
N. Atlantic Exp., vol. 2, p. 3, pl. 7, figs. 3, 4.
Plover Bay to Port Althorp, Alaska. Circumboreal.

LORA TENUILIRATA Dall, 1871.
Amer. Journ. Conch., vol. 7, p. 98; Proc. U. S. Nat. Mus., vol. 56, pl. 15, fig. 4.
Point Barrow, Arctic Ocean, to the Shumagin Islands, Alaska.

LORA TENUILIRATA CYMATA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 42, pl. 16, fig. 4.
Nunivak Island, Bering Sea, to the Shumagins.

LORA HEALYI Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 42, pl. 16, fig. 8.
Arctic Ocean north of Bering Strait (Capt. Healy).

LORA MURDOCHIANA Dall, 1884.
Proc. U. S. Nat. Mus., vol. 7, p. 524, pl. 2, fig. 8.
Point Barrow, Arctic Ocean, to the Pribilof Islands, Bering Sea.

LORA CHIACHIANA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 43, pl. 14, fig. 7.
Arctic Ocean to the Chiachi Islands and Port Althorp, Alaska.

LORA MITRATA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 43, pl. 16, fig. 1.
Bering Strait to the Shumagin Islands, Alaska.

LORA ROSEA M. Sars, 1846.
Loven, Ind. Moll. Scand., p. 12.—G. O. Sars Moll. Reg. Arct. Norv., pl. 23, fig. 10.
Simeonoff Island, Shumagins, to San Juan Islands, Washington. Circumboreal.

LORA SIMPLEX Middendorff, 1849.
Mal. Ross., vol. 2, p. 119; Sib. Reise, pl. 12, figs. 15, 16, 1850.
Point Barrow, Arctic Ocean, to the Pribilof Islands and the Okhotsk Sea.

LORA ARCTICA A. Adams, 1855.
Proc. Zool. Soc., p. 121.
Shumagin Islands to Chirikoff Island, Alaska.

LORA LAEVIGATA Dall, 1871.
Amer. Journ. Conch., vol. 7, p. 98, pl. 16, fig. 7.
Kotzebue and Norton Sounds and south to Chirikoff Island, Alaska.

LORA VIOLACEA Mighels and Adams, 1842.
Proc. Boston Soc., Nat. Hist., vol. 1, p. 50.—G. O. SARS, Moll. Reg. Arct. Norv., pl. 17, figs. 2, 3, 1878.
Sea Horse Islands, Arctic Ocean, to Bering Strait and Sitka, Alaska. Fossil on Gravina Island. Circumboreal.

LORA NODULOSA Krause, 1886.
Arch. f. Naturg., vol. 51, p. 277, pl. 18, figs. 4, 12.
St. Lawrence Bay, Bering Strait, to the Aleutians and Cook's Inlet.

LORA ALASKENSIS Dall, 1871.
Amer. Journ. Conch., vol. 7, p. 98; Proc. U. S. Nat. Mus., vol. 9, pl. 4, fig. 3, 1886.
Bering Strait to Puget Sound.

LORA BECKII Moller, 1842.
Index Moll. Grönl., p. 14.
Bernard Harbor, Arctic coast, and eastward. Prince Wm Sound, Eyerdam

LORA TREVELLIANA Turton, 1834.
Ann. Mag. Nat. Hist., vol. 7, p. 351.—G. O. SARS, Moll. Reg. Arct. Norv., pl. 16, fig. 13, 1878.
Arctic Ocean southward to Behm Canal, Alaska. Circumboreal.

LORA LAWRENCIANA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 43, pl. 15, fig. 6.
Point Belcher, Arctic Ocean, to Pribilof Islands, Bering Sea.

LORA EXCURVATA Carpenter, 1865.
Proc. Acad. Nat. Sci. Phila., p. 63; Proc. U. S. Nat. Mus., vol. 56, pl. 14, fig. 5, 1919.
Bristol Bay, Bering Sea, to Puget Sound.

Subfamily MANGILIINAE.

Genus PLEUROTOMELLA Verrill, 1873.

Subgenus PLEUROTOMELLA s. s.

PLEUROTOMELLA THALASSICA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 51, pl. 3, fig. 4.
Off Tillamook Bay, Oregon, in 786 fathoms.

PLEUROTOMELLA HERMINEA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, pl. 3, fig. 6.
Off Catalina Island, California, in 334 to 600 fathoms.

Mangilia barbarensis Oldroyd, n.n.

Genus GLYPHOSTOMA Gabb, 1873.

GLYPHOSTOMA CONRADIANA Gabb, 1869.
Pal. Cal., vol. 2, p. 7, pl. 1, fig. 12.
San Pedro. Also Pleistocene.

GLYPHOSTOMA ADRIA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 52, pl. 17, fig. 5.
San Pedro, California, to Santa Maria Bay, Lower California.

GLYPHOSTOMA CYMODOCE Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 54, pl. 17, fig. 6.
Monterey to Santa Barbara, California.

Genus PHILBERTIA Monterosato, 1884.

PHILBERTIA CANFIELDI Dall, 1871.
Amer. Journ. Conch., vol. 7, p. 101, pl. 15, fig. 9.
Crescent City to Laguna Beach, California.

PHILBERTIA AFFINIS Dall, 1871.
Amer. Journ. Conch., vol. 7, p. 102; Proc. Cal. Acad. Sci., vol. 5, pl. 2, fig. 7, 1873.
San Miguel Island, Long Beach, and Laguna Beach, California. Cape San Lucas? breakwater, San Pedro, San Martin Id. L. Cal. Baker.

? **PHILBERTIA RAVA Hinds, 1843.**
Proc. Zool. Soc., p 39; Voy. *Sulphur*, Zool., pl. 5, fig. 18, 1844.
Laguna Beach, California, to Gulf of California.

PHILBERTIA CRYSTALLINA Gabb, 1865. (Plate 6, fig. 4.)
Proc. Cal. Acad. Sci., vol. 3, p. 184.
Off Catalina Island, in 50 fathoms.

PHILBERTIA HESIONE Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 54.
Point Pinos to Point Loma, California.

? PHILBERTIA CASTIANIRA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 15, pl. 2, fig. 1.
Off Cape San Martin, California.

? PHILBERTIA LOUISA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 75, pl. 24, fig. 3.
Off San Luis Obispo, California.

PHILBERTIA CAPANIOLA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 304.
Off San Diego, California.

Genus MANGILIA Risso, 1826.

MANGILIA ANGULATA Carpenter, 1864. Suppl. Rep. B. As. p. 658. 4/
Ann. Mag. Nat. Hist., ser. 3, vol. 15, p. 394.—ARNOLD, Pal. San Pedro, pl. 7, fig. 9, 1903.
Puget Sound to the Gulf of California. not of Reeve, 1846.

MANGILIA ALEUTICA Dall, 1871.
Amer. Journ. Conch., vol. 7, p. 99; Proc. U. S. Nat. Mus., vol. 9, pl. 3, fig. 6, 1886.
Cape Sabine, Arctic Ocean, to Fuca Strait.

MANGILIA CETOLACA Dall, 1908.
Bull. Mus. Comp. Zool., vol. 43, p. 286; Pal. San Pedro, pl. 6, fig. 7, 1903.
Lower California to Salina Cruz, Mexico. Pleistocene of San Pedro and Santa Monica, California.

MANGILIA CARLOTTAE Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 65, pl. 21, figs. 9, 12.
Off Queen Charlotte Islands, British Columbia, in 876 fathoms.

MANGILIA NUNIVAKENSIS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 65, pl. 1, fig. 2.
Nunivak Island, Bering Sea.

MANGILIA ERIOPIS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 67, pl. 23, fig. 1.
Forrester Island, Alaska, and the Queen Charlotte Islands.

MANGILIA OLDROYDI Arnold, 1903.
Pal. San Pedro, p. 213, pl. 6, fig. 16.
Pleistocene, San Pedro, California.

MANGILIA CONSTRICTA Gabb, 1865.
Proc. Cal. Acad. Sci., vol. 3, p. 84.
Catalina Island, 80 fathoms.

MANGILIA GRANITICA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 67.
Granite Cove, Port Althorp, Alaska.

MANGILIA ALTHORPI Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 68, pl. 19, fig. 9.
Granite Cove, Port Althorp, Alaska.

MANGILIA SCULPTURATA Dall, 1886.
Proc. U. S. Nat. Mus., vol. 9, 299, pl. 4, fig. 7.
Chiachi Islands to Port Etches, Alaska.

MANGILIA HOOVERI Arnold, 1903.
Pal. San Pedro, p. 212, pl. 9, fig. 5.
San Pedro to San Diego, California. Pleistocene.

MANGILIA BETA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 64, pl. 22, fig. 4.
Point Ano Nuevo to San Diego, California.

MANGILIA ERIPHYLE Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 69.
Off Esteros Bay, California, to Coronado Islands.

MANGILIA CESTA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 71, pl. 21, fig. 7.
"California" (Mrs. Blood).

Mangilia hamatā Cpr.

Panama, Jewett, "San Diego Gripp. Pt. Abreojos, L. Cal H."
fide E. Jordan, (?)

MANGILIA EVADNE Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 69, pl. 23, fig. 2.
Off Santa Rosa Island, California, in 53 fathoms.

MANGILIA PULCHRIOR Dall, 191~~9~~. 21
Cpr. 186~~3~~, Ann. Mag. Nat. Hist., ser. 3, vol. 15, p. 394 (preoccupied). 57
Monterey, California, to Magdalena Bay, Lower California.

MANGILIA OENOA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 66, pl. 8, fig. 6.
San Pedro to San Diego, California.

MANGILIA PAINEI Arnold, 1903.
Pal. San Pedro, p. 214, pl. 8, fig. 1.
San Pedro to San Diego, California. Pleistocene.

MANGILIA PHILODICE Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 66, pl. 22, fig. 7.
Point Ano Nuevo, California, to Coronado Islands.

MANGILIA PERATTENUATA Dall, 1905.
Nautilus, vol. 18, p. 123; Proc. U. S. Nat. Mus., vol. 56, pl. 20, fig. 11, 1919.
Monterey Bay, California.

MANGILIA ALESIDOTA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 304.
Catalina Island, California.

Section KURTZIELLA Dall, 1918.

MANGILIA ARTEAGA Dall and Bartsch, 1910.
Canada Geol. Survey Mem., No. 1143, p. 11, pl. 11, fig. 4.
Vancouver Island to San Diego, California. Fossil, S. Pedro.

MANGILIA ARTEAGA ROPERI Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 64, pl. 22, fig. 5.
Monterey to Cape San Lucas.

MANGILIA NEWCOMBEI Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 71, pl. 21, fig. 4.
Vancouver Island to Drake's Bay, California.

MANGILIA HECETAE Dall and Bartsch, 1910.
Canada Geol. Survey, Mem. No. 1143, p. 10, pl. 1, fig. 6.
Vancouver Island to San Diego, California.

MANGILIA HEBE Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 63, pl. 20, fig. 10.
San Diego, California.

MANGILIA TERSA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 305.
San Diego, California.

Section CLATHROMANGILIA Monterosato, 1884.

MANGILIA INTERLIRATA Stearns, 1871.
Proc. Cal. Acad. Sci., vol. 4, p. 226, pl. 1, fig. 10.
Monterey to Catalina Island, California.

MANGILIA RHYSSA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 62, pl. 21, fig. 3.
Near San Diego, California. Fossil, S. Pedro.

MANGILIA INTERFOSSA Carpenter, 1865.
Ann. Mag. Nat. Hist., ser. 3, vol. 14, p. 30.
Vancouver Island, British Columbia, to Catalina Island, California.

MANGILIA INTERFOSSA PEDROANA Arnold, 1903.
Pal. San Pedro, p. 213, pl. 6, fig. 2.
San Pedro, California. Pleistocene.

MANGILIA LINEOLATA Reeve, 1846.
Conch. Icon., *Pleurotoma*, fig. 337.
Catalina Island, California (Brannan), to Panama and the Galapagos Islands.

MANGILIA CREBRICOSTATA Carpenter, 1865.
Ann. Mag. Nat. Hist., ser. 3, vol. 14, p. 30.
Forrester Island, Alaska, to Monterey, California.

4/ **MANGILIA LEVIDENSIS Carpenter, 186~~5~~.**
Proc. Acad. Nat. Sci. Phila., p. 63; Proc. U. S. Nat. Mus., vol. 56, pl. 21, fig. 1, 1919.
Bering Strait to Monterey, California.

Genus CYTHARELLA Monterosato, 1875.

Section CYTHARELLA s. s.

CYTHARELLA HEXAGONA Gabb, 1865.
Proc. Cal. Acad. Sci., vol. 3, p. 185.
Monterey to San Diego, California.

CYTHARELLA BRANNERI Arnold, 1903.
Pal. San Pedro, p. 211, pl. 9, fig. 10.
San Pedro to San Diego, Pleistocene. Panama, Recent.

CYTHARELLA ACULEA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 74.
San Diego, California, to Cape San Lucas.

CYTHARELLA HIPPOLITA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 76, pl. 22, figs. 6, 8.
San Diego to Lower California.

CYTHARELLA VICTORIANA Dall, 1897.
Bull. Nat. Hist. Soc. Brit. Col., No. 2, p. 13, pl. 1, fig. 9.
Victoria, Vancouver Island.

CYTHARELLA AMATULA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 78, pl. 21, fig. 2.
San Diego, California.

CYTHARELLA MERITA Hinds, 1843.
Proc. Zool. Soc., p. 42; Voy. *Sulphur*, Moll., pl. 6, fig. 20, 1844.
Monterey, California, to Gulf of Nicoya, Central America.

Cytharella louisa Dall, 1919.
Proc. U. S. Nat. Mus. lvi, p. 75, pl. 24, fig. 3,
San Louis Obispo. Cal. Mrs. Dial.

Subgenus AGATHOTOMA Cossmann, 1889.

AGATHOTOMA DENSILINEATA Dall, 1921.
Mangilia striosa in Pal. San Pedro; not of C. B. Adams.
San Pedro, California, to Gulf of California.

AGATHOTOMA FUSCONOTATA Carpenter, 1864.
Ann. Mag. Nat. Hist., ser. 3, vol. 14, p. 46.
Laguna Beach, California, to Gulf of California.

AGATHOTOMA JANIRA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 75, pl. 21, fig. 10.
San Diego, California, to Scammon Lagoon, Lower California.

AGATHOTOMA POMARA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 305.
San Pedro, California (Lowe).

Genus DAPHNELLA Hinds, 1844.

DAPHNELLA CLATHRATA Gabb, 1865.
Proc. Cal. Acad. Sci., vol. 3, p. 185.
San Miguel Island to San Diego and Cortez Bank, California.

? DAPHNELLA FUSCOLIGATA Dall, 1871.
Amer. Journ. Conch., vol. 7, p. 100.—TRYON, Man., vol. 6, pl. 34, fig. 95.
Monterey to San Diego, California. Fossil, San Pedro

Genus TARANIS Jeffreys, 1870.

TARANIS STRONGI Arnold, 1903.
Pal. San Pedro, p. 215, pl. 9, fig. 7.
Forrester Island, Alaska, to San Diego, California. Pleistocene, San Pedro, California.

Family CANCELLARIIDAE.

Genus CANCELLARIA Lamarck, 1799.

Subgenus PROGABBIA Dall, 1918.

PROGABBIA COOPERI Gabb, 1865. (Plate 5, figs. 3, 4.)
Proc. Cal. Acad. Sci., vol. 3, p. 186.—TRYON, Man, vol. 7, pl. 4, fig. 66, 1885.
Monterey, California, to the Coronado Islands.

PROGABBIA IO Dall, 1896.
Proc. U. S. Nat. Mus., vol. 18, p. 14; Bull. Mus. Comp. Zool., vol. 43, No. 6. pl. 1, fig. 2
San Diego, California (650 fathoms) to Gulf of Panama (322 fathoms).

PROGABBIA CORBICULA Dall, 1906.
Bull. Mus. Comp. Zool. vol. 43, No. 6, p. 294, pl. 1, fig. 4.
Santa Barbara Islands to Coronado Islands.

Section CRAWFORDINA Dall, 1919.

PROGABBIA CRAWFORDIANA Dall, 1891.
Proc. U. S. Nat. Mus., vol. 14, p. 182, pl. 6, fig. 1.
Bodega Bay, to San Diego, California.

Subgenus SVELTIA Jousseaume, 1888.

SVELTIA MODESTA Carpenter, 1865.
Ann. Mag. Nat. Hist., ser. 3, vol. 15, p. 32.
Aleutian Islands, Alaska, to Neah Bay and Puget Sound.

SVELTIA UNALASHKENSIS Dall, 1873.
Proc. Cal. Acad. Sci., vol. 5, p. 58, pl. 2, fig. 1.
Unalaska, Alaska, to Cape Blanco, Oregon. Pr. Wm. Sound. Eyerdam

SVELTIA CIRCUMCINCTA Dall, 1873.
Proc. Cal. Acad. Sci., vol. 5, p. 59, pl. 2, fig. 2.
Unalaska, to Port Etches, Alaska.

Genus ADMETE Kroyer, 1842.

ADMETE MIDDENDORFFIANA Dall, 1884.
Proc. U. S. Nat. Mus., vol. 7, p. 524; vol. 24, pl. 38, fig. 6, 1902.
Arctic coast of Alaska to Bristol Bay, Bering Sea.

ADMETE REGINA Dall, 1911.
Nautilus, vol. 25, No. 2, p. 19.
Arctic Sea to Pribilof Island.

ADMETE RHYSSA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 306.
Santa Rosa Island, California, to South Coronado Island. Also Pleistocene.

ADMETE MICROSOMA Dall, 1908.
Bull. Mus., Comp. Zool., vol. 43, p. 296, pl. 11, fig. 10.
North Coronado Island (656 fathoms) to Acapulco, Mexico (660 fathoms).

ADMETE COUTHOUYI Jay, 1839. **(Plate 16, fig. 7.)**
Cat. Coll., p. 77; Boston Journ. Nat. Hist., vol. 2, pl. 3, fig. 3.
Arctic Sea to San Diego, California. Circumboreal.

ADMETE COUTHOUYI LAEVIOR Leche, 1878.
K. Svensk. Vet. Akad, Handl., vol. 16, p. 48.
Arctic Ocean to Sea Lion Rock, Washington.

ADMETE COUTHOUYI GRACILIOR Carpenter, 1866.
Gabb, Pal. Cal., vol. 2, p. 50.
With the type. Also Pleistocene, San Pedro, California.

ADMETE CALIFORNICA Dall, 1908.
Bull. Mus. Comp. Zool., vol. 43, No. 6, p. 296, pl. 4, fig. 4.
Tillamook, Oregon, to Gulf of California, in deep water.

ADMETE WOODWORTHI Dall, 1905.
Nautilus, vol. 18, No. 11, p. 123.
Monterey to the Santa Barbara Islands.

? Prince W^{m}. Sound, fide Eyerdam.

San Hippolitō Pt. L. Cal., H.H.

Superfamily RHACHIGLOSSA.

(FISSIPEDIA.)

Family OLIVIDAE.

Genus OLIVELLA Swainson, 1840.

OLIVELLA BIPLICATA Sowerby, 1825.
Tankerville Cat., App., p. 33.—TRYON, Man., vol. 5, pl. 34, fig. 58.
Vancouver Island to Magdalena Bay, Lower California.

OLIVELLA BIPLICATA LAPILLUS Vanatta, 1915.
Nautilus, vol. 29, p. 71.—SOWERBY, Thes., vol. 4, pl. 18, fig. 290.
San Pedro, California. San Diego, Baker.

OLIVELLA BOETICA Carpenter, 1864. **(Plate 15, fig. 1.)**
Suppl. Rep. Brit. Assoc., p. 651.
Kodiak Island, Alaska, to Cape San Lucas.

OLIVELLA PEDROANA Conrad, 1855.
Pacific R. R. Repts., vol. 5, pl. 6, fig. 51.—TRYON, Man., vol. 5, pl. 14, fig. 62.
Puget Sound to Cape San Lucas.

OLIVELLA PORTERI Dall, 1910.
Nautilus, vol. 23, No. 12, p. 133.
Redondo, California, to Magdalena Bay, Lower California.

(SOLIDIPEDIA.)

Family MARGINELLIDAE.

Genus MARGINELLA Lamarck, 1799.

MARGINELLA JEWETTII Carpenter, 1857.
Proc. Zool. Soc., p. 207.—TRYON, Man., vol. 5, pl. 12, fig. 57.
Monterey to Lower California. San Martin Id. L. Cal. Baker,

MARGINELLA SUBTRIGONA Carpenter, 1865.
Ann. Mag. Nat. Hist., ser. 3, vol. 15, p. 397.—TRYON, Man., vol. 5, pl. 12, fig. 55.
Monterey to San Diego, California. Pt. Abreojos, L. Cal. H.H.

MARGINELLA REGULARIS Carpenter, 1865.
Ann. Mag. Nat. Hist., ser. 3, vol. 15, p. 398.—TRYON, Man., vol. 5, pl. 12, fig. 56.
Monterey to Gulf of California.

Subgenus HYALINA Schumacher, 1817.

HYALINA CALIFORNICA Tomlin, 1916.
Nautilus, vol. 29, p. 138.—ARNOLD, Pal. San Pedro, pl. 4, fig. 9.
San Pedro, California, to Puerto Libertad, Mexico.

HYALINA MYRMECOÖN Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 308.
San Diego, California.

Genus CYSTISCUS Stimpson, 1865.

CYSTISCUS POLITULUS (Cooper MS.) Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 307.
Santa Barbara, California, to Cape San Lucas.

CYSTISCUS MINOR C. B. Adams, 1852.
Panama Shells, p. 264.—Tryon, Man., vol. 5, pl. 12, fig. 65.
San Pedro, California, to Panama.

Genus MEROVIA+ Dall, 1920.

MEROVIA PYRIFORMIS Carpenter, 1865.
Journ. de Conchyl., vol. 13, p. 148.—Tryon, Man., vol. 5, pl. 13, fig. 38.
Peril Strait, Alaska, to Mazatlan, Mexico. Prince Wm. Sound, Eyerdam.

Family VOLUTIDAE.

Genus FULGORARIA Schumacher, 1817.

Subgenus Boreomelon Dall, 1918.

BOREOMELON STEARNSII Dall, 1872 .
Proc. Cal. Acad. Sci., vol. 4, p. 270, pl. 1, fig. 1.
Pribilof, Aleutian, and Shumagin Islands, Alaska.

Genus PHENACOPTYGMA Dall, 1918.

PHENACOPTYGMA CORTEZI Dall, 1908.
Bull. Mus. Comp. Zool., vol. 43, No. 6, p. 292.
Cortez Bank and off San Diego, California, in deep water.

Family MITRIDAE.

Genus STRIGATELLA Swainson, 1840.

Subgenus Atrimitra Dall, 1918.

ATRIMITRA IDAE Melvill, 1893.
The Conchologist, vol. 2, p. 140, pl. 1, fig. 6.
Farallones Islands to Cortez Bank, California.

ATRIMITRA IDAE MONTEREY~~ENSIS~~ Berry, 1920.
Proc. Mal. Soc. London, vol. 14, p. 31, figs. 1–4.
Monterey to San Diego, California.

ATRIMITRA CATALINAE Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 308.
Crescent City to San Diego, California.

ATRIMITRA DIEGENSIS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 309.
Catalina Island to San Diego, California.

+ Cf. Gibberulina Kobelt, 1887, Prodromus = Bullata.
= Cypraeolina Cerulli-Irelli 1911. Cossmann, Essais
X, p.229. Fauna malac. Mariana, V, p.281, pl. 38,
f. 9-11. 1911.

ATRIMITRA? LOWEI Dall, 1903. (Plate 15, fig. 4.)
Proc. Biol. Soc. Wash., vol. 16, p. 173.
Off Avalon, Catalina Island, California.

Genus MITRA Lamarck, 1799.

Section THALA H. and A. Adams, 1853.

MITRA SOLITARIA C. B. Adams, 1852.
Panama Shells, p. 44; Proc. U. S. Nat. Mus., vol. 13, pl. 15, fig. 14, 1890.
Point Loma, California, to Panama.

MITRA ORCUTTI Dall, 1920. 3/
Nautilus, vol. ~~1~~3, No. 3, p. 103.
La Jolla, California.

Genus VOLUTOMITRA Gray, 1857.

VOLUTOMITRA ALASKANA Dall, 1902. (Plate 11, fig. 3.)
Nautilus, vol. 15, p. 103; Smithsonian Misc. Coll., vol. 48, p. 142, 1907.
Pribilof Islands and southward. Off San Diego, California, in 822 fathoms.

? Genus MITROMORPHA A. Adams, 1865.

MITROMORPHA FILOSA Carpenter, 186~~5~~. 4/
Ann. Mag. Nat. Hist., ser. 3, vol. 15, p. 182; Proc. U. S. Nat. Mus., vol. 15, pl. 19, fig. 1, 1892.
Monterey, California, to Gulf of California.

MITROMORPHA ASPERA Carpenter, 186~~5~~. 4/
Journ. de Conchyl., vol. 12, p. 146.—TRYON, Man., vol. 6, pl. 25, fig. 61.
Monterey to San Pedro, California. San Diego, Baker.

MITROMORPHA GRACILIOR Hemphill, 1884.
TRYON, Man. Conch. vol. 6, p. 317, pl. 25, fig. 62.
Forrester Island, Alaska, to San Diego, California. San Geronimo Id. L. Cal. Lowe.

MITROMORPHA GRACILIOR INTERMEDIA Arnold, 1903.
Pal. San Pedro, p. 223, pl. 4, fig. 10.
Santa Rosa Island. Also Pliocene of San Pedro and Pleistocene of Santa Barbara, California.

Family FASCIOLARIIDAE.

Genus PTYCHATRACTUS Stimpson, 1871.

PTYCHATRACTUS OCCIDENTALIS Stearns, 1871. (Plate 6, fig. 8.)
Conch. Memoranda, No. 7, p. 1; Proc. Cal. Acad. Sci., vol. 5, p. 79, 1873.
Bering Island, Bering Sea, and eastward to the Shumagin Islands, Alaska.

PTYCHATRACTUS CALIFORNICUS Dall, 1903.
Bull. Mus. Comp. Zool., vol. 43, p. 299.
Monterey Bay, and near San Diego, California, in 822 fathoms.

Genus FUSINUS Rafinesque, 1815.

Section HEILPRINIA Grabau, 1904.

FUSINUS TRASKI Dall, 1915.
Nautilus, vol. 29, No. 5, p. 54.—Arnold, Pal. San Pedro, pl. 4, fig. 7, 1903.
San Pedro to San Diego, California.

FUSINUS BARBARENSIS Trask, 1855.
Proc. Cal. Acad. Sci., vol. 1, p. 42.—Arnold, Pal. San Pedro, pl. 4, fig. 15.
Heceta Bank, Oregon, to San Diego, California.

FUSINUS MONKSAE Dall, 1915.
Nautilus, vol. 29, No. 5, p. 55.
Banks Island, British Columbia, to Pequena Bay, Lower California.

FUSINUS KOBELTI Dall, 1877.
Proc. Cal. Acad. Sci., vol. 7, p. 54; Proc. U. S. Nat. Mus., vol. 14, pl. 6, fig. 4, 1891. p. 177.
Monterey to Catalina Island, California. and San Diego.

Section FUSINUS s. s.

FUSINUS LUTEOPICTUS Dall, 1877.
Proc. Cal. Acad. Sci., vol. 7, p. 3; Proc. U. S. Nat. Mus., vol. 15, pl. 20, fig. 1, 1892.
Monterey to Gulf of California.

FUSINUS DIMINUTUS Dall, 1915.
Nautilus, vol. 29, No. 5, p. 56.
San Pedro, California.

Section HARFORDIA Dall, 1920.

FUSINUS HARFORDII Stearns, 1871.
Conch. Memoranda, No. 7, p. 1; Proc. U. S. Nat. Mus., vol. 14, pl. 6, fig. 6, 1891.
Coast of Mendocino County, California.

Subgenus Roperia Dall, 1898.

ROPERIA ROPERI Dall, 1898.
Nautilus, vol. 12, No. 1, p. 4; Proc. U. S. Nat. Mus., vol. 24, pl. 34, fig. 3, 1902.
San Pedro, California, in deep water.

Subgenus Aptyxis Troschel, 1868.

APTYXIS TAYLORIANUS Reeve, 1848.
Conch. Icon., *Fusus*, fig. 85.
San Pedro? (Baldridge). Cape San Lucas to Panama.

Genus METZGERIA Norman, 1879.

METZGERIA CALIFORNICA Dall, 1903. (Plate 13, fig. 7.)
Nautilus, vol. 17, No. 5, p. 51.
Off Avalon, Catalina Island, California.

Pt. Abreojos. L. Cal. H.H.

Family CHRYSODOMIDAE.

Genus KELLETTIA Bayle, 1884.

KELLETTIA KELLETTII Forbes, 1850.
Proc. Zool. Soc., p. 274, pl. 9, fig. 10.
Santa Barbara, California, to San Quentin Bay, Lower California. Also Japan.

Genus MACRON H. and A. Adams, 1853.

MACRON AETHIOPS KELLETTII A. Adams, 1853.
Proc. Zool. Soc., p. 185.—Tryon, Man., pl. 82, fig. 477.
Catalina Island? (Cooper). Lower California and the Gulf of California.

MACRON LIVIDUS A. Adams, 1854.
Proc. Zool. Soc., p. 136.—Tryon, Man., pl. 82, fig. 478.
Farallones Islands, California, to San Bartolomé Bay, Lower California.

Genus PYRULOFUSUS Mörch, 1869.

PYRULOFUSUS DEFORMIS Reeve, 1847.
Conch. Icon., *Fusus*, fig. 45.
Arctic Ocean and south to the Shumagin Islands, Alaska. Circumboreal.

PYRULOFUSUS HARPA Mörch, 1858. **(Plate 7.)**
Novit. Conch., Moll. Marina, p. 5, pl. 1, figs. 3, 4.
Pribilof Islands to the Aleutians and eastward to Kodiak Island, Alaska.

PYRULOFUSUS HARPA DEXIUS Dall, 1907.
Smithsonian Misc. Coll., vol. 50, p. 164.
Petrel Bank, Bering Sea, in 54 fathoms.

Genus VOLUTOPSIUS Mörch, 1857.

VOLUTOPSIUS FRAGILIS Dall, 1891.
Proc. U. S. Nat. Mus., vol. 14, p. 187; vol. 17, pl. 28, fig. 4, 1894.
Bering Sea, 15 to 121 fathoms.

VOLUTOPSIUS MELONIS Dall, 1891.
Proc. U. S. Nat. Mus., vol. 14, p. 187; vol. 17, pl. 28, figs. 2, 3, 1894.
Bering Sea, 227 fathoms.

VOLUTOPSIUS BERINGI Middendorff, 1848.
Mal. Rossica, vol. 2, p. 147, pl. 3, figs. 5, 6.
Arctic Ocean to Pribilof Islands, 17 to 50 fathoms.

VOLUTOPSIUS BERINGI KOBELTI Dall, 1902.
Proc. U. S. Nat. Mus., vol. 24, No. 1264, p. 528, pl. 35, fig. 2.
North end of Nunivak Island, Bering Sea, and at the Pribilof Islands.

VOLUTOPSIUS STEFANSSONI Dall, 1919. **(Plate 9, fig. 2.)**
Sci. Res. Canadian Arct. Exp., vol. 8, p. 22*a*, pl. 1.
Arctic Ocean to Pribilof Islands, Bering Sea.

VOLUTOPSIUS ROTUNDUS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 310.
Kodiak Island to Cooks Inlet.

VOLUTOPSIUS MIDDENDORFFII Dall, 1891.
Proc. U. S. Nat. Mus., vol. 14, p. 186; vol. 17, pl. 28, fig. 1, 1894.
Bering Sea, 57 to 225 fathoms.

VOLUTOPSIUS SIMPLEX Dall, 1907. **(Plate 9, fig. 1.)**
Smithsonian Misc. Coll., vol. 50, p. 164.
Off Bering Island, Bering Sea, in 72 fathoms.

VOLUTOPSIUS ATTENUATUS Dall, 1874.
Proc. Cal. Acad. Sci., vol. 5, p. 253; Proc. U. S. Nat. Mus., vol. 24, pl. 36, fig. 3, 1902.
Arctic Ocean south to the Pribilof Islands and Bristol Bay.

VOLUTOPSIUS TROPHONIUS Dall, 1902. **(Plate 8, fig. 11.)**
Proc. U. S. Nat. Mus., vol. 24, No. 1264, p. 527.
Bering Sea, in 81 fathoms, south of the Pribilof Islands.

VOLUTOPSIUS FILOSUS Dall, 1919. **(Plate 10, fig. 1.)**
Proc. U. S. Nat. Mus., vol. 56, No. 2295. p. 310.
From the Pribilof to the Aleutian Islands, Bering Sea.

VOLUTOPSIUS CALLORHINUS Dall, 1877.
Proc. Cal. Acad. Sci., vol. 7, p. 7; Sci. Res. Expl. Alaska, pl. 1, fig. 3, 1879.
Pribilof Islands, Bering Sea.

VOLUTOPSIUS CALLORHINUS STEJNEGERI Dall, 1884. **(Plate 8, fig. 9.)**
Proc. U. S. Nat. Mus., vol. 7, p. 346, pl. 2, fig. 5.
Bering Island.

VOLUTOPSIUS CASTANEUS Mörch, 1858.
Novit. Conch., Moll. Marina, p. 7, pl. 1, figs. 1, 2.
Pribilof, Aleutian, and Kodiak Islands, Alaska. (Sitka, Dunbar.)

VOLUTOPSIUS REGULARIS Dall, 1873.
Proc. Cal. Acad. Sci., vol. 5, p. 60, pl. 2, fig. 6.
Pribilof, Aleutian, and Sannakh Islands, Alaska.

Genus BERINGIUS Dall, 1879.

BERINGIUS CREBRICOSTATUS Dall, 1877.
Proc. Cal. Acad. Sci., vol. 7, p. 6; Sci. Res. Expl. Alaska, pl. 2, fig. 1, *a–c*, 1879; Proc. U. S. Nat. Mus., vol. 24, pl. 35, fig. 1.
Plover Bay, the Aleutian Islands, and eastward to the Shumagin Islands, Alaska. Afognak Id. 20 fm. Eyerdam.

BERINGIUS CREBRICOSTATUS UNDATUS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 311.
Unalaska, Alaska, south and east to British Columbia in 238 fathoms.

1871 **BERINGIUS KENNICOTTII Dall, ~~1907.~~**
Amer. Journ. Conch., vol. 7, p. 108; Proc. U. S. Nat. Mus., vol. 24, pl. 35, fig. 3, 1902.
Aleutian Islands to Cooks Inlet, Alaska.

BERINGIUS KENNICOTTII INCISUS Dall, 1907.
Smithsonian Misc. Coll., vol. 50, p. 163. Proc. U. S. N. M. vol. 56, p 311, 1919.
Petrel Bank, Bering Sea, 54 fathoms.

BERINGIUS STIMPSONI Gould, 1860.
Proc. Boston Soc. Nat. Hist., vol. 7, p. 325.
Point Barrow to the Pribilof Islands, Alaska.

BERINGIUS MALLEATUS Dall, 1884.
Proc. U. S. Nat. Mus., vol. 7, p. 525.
Arctic Ocean and Northern Bering Sea.

BERINGIUS FRIELEI Dall, 1894.
Proc. U. S. Nat. Mus., vol. 17, p. 711, pl. 27, fig. 8.
Pribilof Islands, Bering Sea, 66 fathoms.

BERINGIUS ALEUTICUS Dall, 1894.
Proc. U. S. Nat. Mus., vol 17, p. 711, pl. 29. fig. 2.
Amukhta Pass, Aleutian Islands, 248 fathoms.

BERINGIUS MARSHALLI Dall, 1919. **(Plate 9, fig. 3.)**
Proc. U. S. Nat. Mus., vol. 56, p. 311.
Pribilof Islands to Unalaska, Alaska.

BERINGIUS INDENTATUS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 312.
Kotzebue Sound to the Aleutian Islands, also north Japan seas.

Genus LIOMESUS Stimpson, 1865.

LIOMESUS NASSULA Dall, 1901. **(Plate 8, fig. 6.)**
Nautilus, vol. 15, No. 8, p. 89.
Bering Sea from the Pribilof Islands to the Peninsula of Alaska, 34 to 121 fathoms. Japan?

LIOMESUS OOIDES Middendorff, 1848.
Bull. Acad. St. Petersb., vol. 7, No. 16, p. 6; Sib. Reise, vol. 2, 326, pl. 8, figs. 7, 8.
Okhotsk Sea, also Pleistocene of Yesso, Hokkaido, Japan.

LIOMESUS OOIDES CANALICULATUS Dall, 1874.
Proc. Cal. Acad. Sci., vol. 5, p. 252; Sci. Res. Expl. Alaska, pl. 4, fig. 4. Proc. U. S. Nat. Mus., vol. 24, pl. 38, fig. 2.
Icy Cape, Arctic Ocean, to the Shumagin Islands.

LIOMESUS NUX Dall, 1877.
Proc. Cal. Acad. Sci., vol. 7, p. 7; Proc. U. S. Nat. Mus., vol. 24, pl. 38, fig. 7.
Aleutian Islands to Shumagin Islands, Alaska. Also Japan Sea.

Genus MOHNIA Friele, 1878.

MOHNIA ROBUSTA Dall, 1913. **(Plate 10, fig. 12.)**
Proc. Acad. Nat. Sci. Phila., p. 501.
Off the Pribilof Islands, 987 to 1,401 fathoms.

MOHNIA CORBIS Dall, 1913. **(Plate 12, fig. 10.)**
Proc. Acad. Nat. Sci., Phila., p. 501.
Off the Pribilof Islands, 1,771 fathoms.

MOHNIA FRIELEI Dall, 1891.
Proc. U. S. Nat. Mus., vol. 14, p. 186; vol. 17, pl. 29, fig. 8, 1894.
Off Queen Charlotte Islands, British Columbia, in 876 fathoms.

MOHNIA VERNALIS Dall, 1913.
Proc. Acad. Nat. Sci. Phila., p. 502.
Tillamook Bay, Oregon, to Monterey, California; 786 to 881 fathoms.

MOHNIA SIPHONOIDEA Dall, 1913. **(Plate 12, fig. 11.)**
Proc. Acad. Nat. Sci. Phila., p. 502.
Off Pribilof Islands, in 987 fathoms.

MOHNIA EXQUISITA Dall, 1913. **(Plate 10, figs. 10, 11.)**
Proc. Acad. Nat. Sci. Phila., p. 502.
Bering Sea, off Koniugi Island, Aleutians, in 1,766 fathoms.

Genus ANCISTROLEPIS Dall, 1894.

ANCISTROLEPIS EUCOSMIUS Dall, 1891.
Proc. U. S. Nat. Mus., vol. 14, p. 187; vol. 17, pl. 29, fig. 7, 1894.
Pribilof Islands, Alaska, to Tillamook Bay, Oregon, 67 to 786 fathoms.

ANCISTROLEPIS EUCOSMIUS BICINCTUS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 313.
Pribilof Islands to Shumagin Islands, Alaska, in 34 to 280 fathoms.

ANCISTROLEPIS MAGNUS Dall, 1895.
Proc. U. S. Nat. Mus., vol. 17, p. 709, pl. 29, fig. 5.
Okhotsk and Bering Seas, 25 to 70 fathoms.

ANCISTROLEPIS CALIFORNICUS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 313.
Fuca Strait to San Diego, California, 152 to 984 fathoms.

ANCISTROLEPIS BERINGIANUS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 313.
Bering Sea, off Starichkoff Island, 58 fathoms.

? Genus SULCOSINUS Dall, 1894.

SULCOSINUS TAPHRIUS Dall, 1891.
Proc. U. S. Nat. Mus., vol. 14, p. 186; vol. 17, p. 707, pl. 29, fig. 6, 1895.
Bering Sea, off Unalaska, in 351 fathoms.

Genus EXILIA Conrad, 1860.

EXILIA RECTIROSTRIS Carpenter, 1865.
Proc. Acad. Nat. Sci. Phila., p. 64; Proc. U. S. Nat. Mus., vol. 24, pl. 34, fig. 2.
Behm Canal, Alaska, to Cape San Quentin, Lower California.

EXILIA KELSEYI Dall, 1908.
Proc. U. S. Nat. Mus., vol. 34, p. 249.
Bodega Head to San Diego, California, 50 to 359 fathoms.

Genus PLICIFUSUS Dall, 1902.

PLICIFUSUS KROYERI Moller, 1842.
Ind. Moll. Grönl., p. 15.—Tryon, Man., vol. 3, pl. 53, fig. 335.
Point Barrow, Arctic Ocean. Circumboreal.

PLICIFUSUS ARCTICUS Philippi, 1850.
Abb. u. Beschr. Moll., vol. 3, p. 119, pl. 5, fig. 5.
Arctic Ocean, Bering Sea, Aleutians to Shumagin Islands, Alaska. Circumboreal.

PLICIFUSUS JOHANSENI Dall, 1919.
Sci. Res. Canadian Arct. Exp., vol. 8, p. 21 A, pl. 3.
Point Barrow to Icy Cape, Arctic Ocean.

? PLICIFUSUS VERKRUZENI Kobelt, 1876.
Jahrb. Mal. Ges., 1876, p. 70, pl. 2, fig. 1.
Arctic Ocean to Bering Strait. Circumboreal.

Subgenus RETIFUSUS Dall, 1916.

RETIFUSUS VIRENS Dall, 1877.
Proc. Cal. Acad. Sci., vol. 7, p. 6; Sci. Res. Expl. Alaska, pl. 2, fig. 3, 1879.
Bering Sea to Middleton Island, Alaska. Japan?

RETIFUSUS INCISUS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 314.
Arctic Ocean; Bering Sea; east to the Shumagin Islands, 38 to 54 fathoms.

RETIFUSUS OCEANODROMAE Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 314.
Petrel Bank, Bering Sea; the Aleutians eastward to the Shumagin Islands.

Section MICROFUSUS Dall, 1916.

RETIFUSUS BRUNNEUS Dall, 1877.
Proc. Cal. Acad. Sci., vol. 7, p. 6; Sci. Res. Expl. Alaska, pl. 2, fig. 4, 1879.
Port Clarence, Bering Strait, to Nunivak and the Pribilof Islands.

Section LATIFUSUS Dall, 1916.

RETIFUSUS GRISEUS Dall, 1889.
Proc. U. S. Nat. Mus., vol. 12, p. 322, pl. 5, fig. 6.
Bering Sea (27 fathoms) to San Diego, California (636 fathoms).

Section HELICOFUSUS Dall, 1916.

PLICIFUSUS LATICORDATUS Dall, 1907.
Smithsonian Misc. Coll., vol. 50, p. 161.
Bering Sea (33 to 76 fathoms) south to Fuca Strait (559 fathoms).

Genus COLUS Bolten, 1798.

Subgenus AULACOFUSUS Dall, 1918.

AULACOFUSUS SPITSBERGENSIS Reeve, 1855.
Last of the Arctic Voy., p. 395, pl. 32, fig. 6.
Circumboreal. Arctic Ocean south to Northern Japan and Fuca Strait, 12 to 142 fathoms.

AULACOFUSUS PERISCELIDUS Dall, 1891.
Proc. U. S. Nat. Mus., vol. 14, p. 187; vol. 17, pl. 27, fig. 6, 1894.
Commander and Aleutian Islands eastward to Sannakh Islands, Alaska.

AULACOFUSUS HERENDEENI Dall, 1902. (Plate 8, fig. 4.)
Proc. U. S. Nat. Mus., vol. 24, p. 527, pl. 36, fig. 10.
Southern Bering Sea, Nunivak Island to the Aleutians and eastward to the Shumagin Islands, Alaska, 41 to 284 fathoms.

AULACOFUSUS NOBILIS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 315.
Near Pribilof Islands, 60 fathoms.

AULACOFUSUS CALAMEUS Dall, 1907. (Plate 10, fig. 5.)
Smithsonian Misc. Coll., vol. 50, p. 158.
Western Bering Sea off Starichkoff Island, in 632 fathoms.

AULACOFUSUS OMBRONIUS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 315.
Eastern Bering Sea, from Nunivak Island south to Bristol Bay and the Pribilof Islands.

AULACOFUSUS BRISTOLENSIS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 316.
Pribilof Islands north and east to Unimak Island, Alaska, 27 to 62 fathoms.

AULACOFUSUS, species (jun.)
Boca de Quadra, Alaska, in 160 fathoms.

AULACOFUSUS ESYCHUS Dall, 1907. (Plate 10, fig. 8.)
Smithsonian Misc. Coll., vol. 50, p. 159.
Point Barrow, Arctic Ocean, to Bering Island.

AULACOFUSUS ROSEUS Dall, 1877.
Proc. Cal. Acad. Sci., vol. 7, p. 7; Sci. Res. Expl. Alaska, pl. 3, fig. 5, 1879.
Off Cape Lisburne, Arctic Ocean, 10 to 15 fathoms.

AULACOFUSUS BARBARINUS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 316.
Southern Bering Sea, off Khudubine Island, 53 fathoms.

AULACOFUSUS SAPIUS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 317.
Off Sitka, Alaska, in 1,569 fathoms.

AULACOFUSUS CALATHUS Dall, 1919. (Plate 8, fig. 2.)
Proc. U. S. Nat. Mus., vol. 56, p. 317.
Near Shumagin Islands, 159 fathoms.

AULACOFUSUS CAPPONIUS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 317.
Bering Strait near Port Clarence.

AULACOFUSUS ACOSMIUS Dall, 1891.
Proc. U. S. Nat. Mus., vol. 14, p. 188; vol. 17, pl. 27, fig. 3, 1894.
Off Pribilof Islands, Bering Sea (688 fathoms), to Unalaska (399 fathoms).

AULACOFUSUS HALIDONUS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 318.
Pribilof Islands (81 fathoms) to Monterey Bay, California (633 fathoms).

Section LIMATOFUSUS Dall, 1918.

AULACOFUSUS TROPHIUS Dall, 1919. (Plate 10, fig. 9.)
Proc. U. S. Nat. Mus., vol. 56, p. 319.
Eastern Bering Sea south of Pribilof Islands (27 fathoms) south to San Nicolas Island, California (1,100 fathoms).

AULACOFUSUS TAHWITANUS Dall, 1918.
Proc. U. S. Nat. Mus., vol. 54, p. 228.
Off Tahwit Head, Washington, in 178 fathoms.

AULACOFUSUS MORDITUS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 319.
Gulf of Georgia, 60 to 200 fathoms.

AULACOFUSUS TIMETUS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 318.
Bering Sea, off Unalaska, in 19 fathoms.

AULACOFUSUS DIMIDIATUS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 319.
Off Tillamook Bay, Oregon, in 786 fathoms.

AULACOFUSUS SEVERINUS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 320.
Off Pigeon Point and Monterey Bay, California, in 278 to 296 fathoms.

AULACOFUSUS PULCIUS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 318.
Arctic Ocean, north of Bering Strait (Healy).

AULACOFUSUS GEORGIANUS Dall, 1920. (Plate 8, fig. 3.)
Gulf of Georgia, in 60 to 200 fathoms.

AULACOFUSUS HALIMERIS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 320.
British Columbia to San Diego, California, 60 to 822 fathoms.

AULACOFUSUS TROMBINUS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 321.
Pribilof Islands, Bering Sea, in 36 fathoms.

Subgenus ANOMALOSIPHO Dautzenberg and Fischer, 1912.

ANOMALOSIPHO MARTENSI Krause, 1885.
Arch. f. Naturg., vol. 51, p. 287, pl. 18, fig. 18.
Plover Bay, Bering Strait, 20 fathoms.

ANOMALOSIPHO ADONIS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 316.
Straits of Fuca south to San Diego, California, in 175 to 822 fathoms; Northern Japan, 25 to 508 fathoms.

ANOMALOSIPHO CONULUS Aurivillius, 1885.
Vega Exp. Vet. Arb., vol. 4, p. 354, pl. 13, fig. 6.
Arctic Ocean north of Bering Strait. Circumboreal.?

Subgenus LATISIPHO Dall, 1916.

LATISIPHO HYPOLISPUS Dall, 1891.
Proc. U. S. Nat. Mus., vol. 14, p. 188; vol. 17, pl. 27, fig. 1, 1894.
Arctic Ocean (Healy) to the Aleutian Islands and eastward to Shelikoff Strait, Alaska.

LATISIPHO ERRONES Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 321.
Pribilof Islands, Bering Sea (18 fathoms), to Strait of Fuca (308 fathoms).

H/ **LATISIPHO ~~D~~ALLI Dall, 1873.**
Proc. Cal. Acad. Sci., vol. 5, p. 59, pl. 2, fig. 3.
Nunivak Island, Bering Sea, to San Diego, California, in 65 to 293 fathoms.

LATISIPHO JORDANI Dall, 1913. **(Plate 12, fig. 7.)**
Proc. U. S. Nat. Mus., vol. 45, No. 2002, p. 588.
Bering Sea, 70 to 100 fathoms; British Columbia, 67 to 142 fathoms; Monterey Bay, California, 633 fathoms.

LATISIPHO APHELUS Dall, 1889.
Proc. U. S. Nat. Mus., vol. 12, p. 323, pl. 6, fig. 7.
Chirikoff Island, Alaska, to San Diego, California, 290 to 626 fathoms.

LATISIPHO HALIBRECTUS Dall, 1891.
Proc. U. S. Nat. Mus., vol. 14, p. 188; vol. 17, pl. 29, fig. 9.
Southern Bering Sea, near Unalaska Island, 351 to 399 fathoms.

LATISIPHO CLEMENTINUS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 321.
Monterey Bay to San Diego, California, 339 to 704 fathoms.

LATISIPHO DALMASIUS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 322.
Off British Columbia in 238 fathoms.

Genus CHRYSODOMUS Swainson, 1840.

Section SULCOSIPHO Dall, 1916.

CHRYSODOMUS TABULATUS Baird, 1863.
Proc. Zool. Soc., p. 66; Proc. U. S. Nat. Mus., vol. 24, pl. 36, fig. 5, 1902.
British Columbia and south to San Diego, California, in 46 to 218 fathoms.

Section CHRYSODOMUS s. s.

CHRYSODOMUS AMIANTUS Dall, 1889.
Proc. U. S. Nat. Mus., vol. 12, p. 321, pl. 5, fig. 10.
Pribilof Islands, Bering Sea, to Monterey Bay, California, 86 to 795 fathoms. Sta. Barbara Id.

CHRYSODOMUS INSULARIS Dall, 1894.
Proc. U. S. Nat. Mus., vol. 17, p. 707, pl. 29, fig. 3.
Pribilof Islands, Bering Sea, 184 fathoms. Kuril Islands (var.?)

CHRYSODOMUS ONCODES Dall, 1907. **(Plate 9, fig. 8.)**
Smithsonian Misc. Coll., vol. 50, p. 155.
Petrel Bank, Bering Sea, 54 fathoms. Also the Kuril Islands, 229 fathoms.

CHRYSODOMUS ITHIUS Dall, 1891.
Proc. U. S. Nat. Mus., vol. 14, p. 187; vol. 17, pl. 29, fig. 4, 1894.
Off Monterey, Cal., 204 to 382 fathoms.

CHRYSODOMUS SMIRNIUS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295. p. 322.
From Nunivak Island to Fuca Strait, 57 to 114 fathoms.

CHRYSODOMUS NUCEUS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 322.
Arctic Ocean to Cooks Inlet, Alaska.

CHRYSODOMUS PHOENICEUS Dall, 1891.
Proc. U. S. Nat. Mus., vol. 14, p. 187; vol. 17, pl. 29, fig. 1, 1894.
Behm Canal, Alaska, to Cascade Head, Oregon.

CHRYSODOMUS BOREALIS Philippi, 1850.
Abb. u. Beschr., vol. 3, p. 118, *Fusus*, pl. 5, fig. 2.
Arctic Ocean to Avacha Bay, Kamchatka, the Aleutian Islands and eastward to the Shumagin Islands, Alaska; 14 to 110 fathoms.

CHRYSODOMUS PRIBILOFFENSIS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 323.
Near Pribilof Islands, Bering Sea, in 52 to 87 fathoms; south and east to Kodiak Island, Alaska, and the Queen Charlotte Islands, British Columbia. Also Japan.

CHRYSODOMUS VINOSUS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 323.
Western Bering Sea and Avacha Bay, 16 fathoms.

CHRYSODOMUS SATURUS Martyn, 1784.
Figs. Nondescript Shells, table 2, fig. 47.
Arctic Ocean from Point Barrow to Bering Strait; Plover Bay, south and east to Cape Douglas, Alaska.

CHRYSODOMUS SATURUS BERINGIANUS Middendorff, 1847.
Bull. Acad. St. Petersb., vol. 7, No. 16; Beitr. Mal. Ross., vol. 2, pl. 2, figs. 3, 4.
Plover Bay, near Bering Strait.

CHRYSODOMUS SATURUS ELATIOR Middendorff, 1848.
Sib. Reise, p. 225, pl. 10, fig. 3.
Norton Sound south to Unalashka, Alaska.

CHRYSODOMUS SATURUS COMMUNIS Middendorff, 1848.
Beitr. Mal. Ross., vol. 2, p. 131, pl. 5, figs. 5, 6.
Point Barrow, Arctic Ocean, to Bering Strait.

CHRYSODOMUS SATURUS TABULARIS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 323.
Pribiloff and Nunivak Islands, Bering Sea.

CHRYSODOMUS SOLUTUS Hermann, 1781.
Der Naturforscher, vol. 16, p. 53, pl. 2, figs. 3, 4.
Mackenzie River delta west to Point Barrow and south to Bristol Bay, Bering Sea.

CHRYSODOMUS SOLUTUS VARICIFERUS Dall, 1920. **(Plate 9, figs. 6, 7.)**
Arctic Ocean, Okhotsk Sea.

CHRYSODOMUS LIRATUS Martyn, 1784.
Figs. Nondescript Shells, table 2, pl. 43.
Icy Cape, Arctic Ocean, south to Japan on the west, to Puget Sound on the east; and off Point Pinos, California, in 958 fathoms.

Genus SEARLESIA Harmer, 1915.

SEARLESIA DIRA Reeve, 1846. (Plate 8, fig. 1.)
Conch. Icon. *Buccinum*, fig. 92.
Chirikoff Island, Alaska, to Monterey, California, also in Pleistocene of Santa Barbara, California.

Family BUCCINIDAE.

Genus BUCCINUM Linnaeus, 1758.

BUCCINUM GLACIALE Linnaeus, 1761.
Fauna Suecica, ed. 2, p. 523.—Tryon, Man., vol. 3, pl. 76, fig. 345.
Circumboreal. Arctic Ocean to Fuca Strait.

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BUCCINUM GLACIALE PARALLELUM Dall, 1919. (Plate 8, fig. 10.)
Proc. U. S. Nat. Mus., vol. 56, p. 231.
Pribilof and Aleutian Islands to Cooks Inlet. Also Kuril Islands.

BUCCINUM HERTZENSTEINI Verkruzen, 1882.
Jahrb. Mal. Ges., vol. 9, p. 214; Conch. Cab., ed. 2, pl. 89, fig. 1, 1883.
Western Bering Sea near Avacha Bay, in 58 fathoms.

BUCCINUM EUGRAMMATUM Dall, 1907. (Plate 12, fig. 2.)
Smithsonian Misc. Coll., vol. 50, No. 1727, p. 153.
Petrel Bank, Bering Sea, in 42 to 54 fathoms.

BUCCINUM TENUE Gray, 1839.
Zool. Beechey's Voy., p. 128, pl. 36, fig. 19.
Circumboreal. Arctic Ocean southward to Kamchatka to the west, the Aleutian Islands to the east and thence to Fuca Strait.

BUCCINUM TENUE RHODIUM Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 324.
Plover Bay, near Bering Strait, 8 to 25 fathoms.

BUCCINUM TENUE LYPERUM Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 324.
Southwestern Bering Sea in 100 fathoms.

BUCCINUM PLECTRUM Stimpson, 1865.
Canadian Nat., p. 374; Conch. Cab., ed. 2, pl. 91, fig. 2, 1883.
Point Barrow, Arctic Ocean, south to Puget Sound. Circumboreal.

BUCCINUM SOLENUM Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 325.
Bering Sea, Nunivak Island, to north of Unimak Island, in 36 fathoms.

BUCCINUM HUMPHREYSIANUM Bennett, 1825.
Zool. Journ., vol. 1, p. 398; Jeffr. Brit. Conch., pl. 88, fig. 1.
"Northwest America" (Pease); exotic?

BUCCINUM OEDEMATUM Dall, 1907. (Plate 12, fig. 1.)
Smithsonian Misc. Coll., vol. 50, No. 1727, p. 145.
Pribilof and Sannakh Islands, to Tahwit Head, Washington.

BUCCINUM POLARE Gray, 1839.
Zool. Beechey's Voy., p. 128; Conch. Cab., ed. 2, pl. 9, fig. 4, 1883.
Arctic Ocean and south in Bering Sea to Avacha Bay, Kamchatka, on the west, and to Alaska Peninsula on the east.

BUCCINUM CHARTIUM Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 325.
Off Pribilof Islands, in 688 fathoms. Also Japan.

BUCCINUM PEMPHIGUS Dall, 1907.
Smithsonian Misc. Coll., vol. 50, p. 151.
Western Bering Sea, off Avacha Bay, 682 fathoms.

BUCCINUM PEMPHIGUS MAJOR Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 325.
Western Bering Sea and south to Japan, 100 fathoms.

BUCCINUM PEMPHIGUS OROTUNDUM Dall, 1907. (Plate 12, fig. 9.)
Smithsonian Misc. Coll., vol. 50, No. 1727, p. 152.
Nunivak, Pribilof, and Unimak Islands, Bering Sea.

BUCCINUM VIRID~~UM~~ Dall, 1889. e/
Proc. U. S. Nat. Mus., vol. 12, p. 320, pl. 6, fig. 9.
Both coasts of Bering Sea from the Pribilof Islands southward to Santa Barbara Islands, California, in 414 fathoms.

BUCCINUM PLANETICUM Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 326.
From the Pribilof Islands, Bering Sea, to the Queen Charlotte Islands, British Columbia.

BUCCINUM DIPLODETUM Dall, 1907. (Plate 10, fig. 3.)
Smithsonian Misc. Coll., vol. 50, No. 1727, p. 143.
Off Sitka, Alaska, 1,569 fathoms, and Sea Lion Rock, Washington, in 877 fathoms.

BUCCINUM CNISMATUM Dall, 1907. (Plate 10, fig. 2.)
Smithsonian Misc. Coll. vol. 50, No. 1727, p. 143.
Bering Sea, north of Unalaska, in 300 fathoms.

BUCCINUM KADIAKENSE Dall, 1907. (Plate 15, fig. 5.)
Smithsonian Misc. Coll., vol. 50, No. 1727, p. 147.
Kodiak Islands, Alaska.

BUCCINUM BULIMULOIDEUM Dall, 1907. (Plate 15, fig. 2.)
Smithsonian Misc. Coll., vol. 50, No. 1727, p. 150.
Near the Shumagin Islands, Alaska, in 159 fathoms.

BUCCINUM RONDINUM Dall, 1919. (Plate 12, fig. 3.)
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 326.
Southeastern Bering Sea off the peninsula of Alaska, in 159 fathoms.

BUCCINUM CASTANEUM Dall, 1877.
Proc. Cal. Acad. Sci., vol. 7, p. 3; Proc. U. S. Nat. Mus., vol. 24, pl. 37, fig. 7, 1902.
Sannakh and Shumagin Islands, 20 to 41 fathoms.

BUCCINUM CASTANEUM FLUCTUATUM Dall, 1919.

Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 327.

Pribilof Islands to Unimak Pass and the Shumagin Islands, Alaska, in 30 to 56 fathoms.

BUCCINUM CASTANEUM TRIPLOSTEPHANUM Dall, 1919.

Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 327; vol. 24, pl. 37, fig. 9, 1902.

Kyska and Amchitka Islands, Aleutians, in 8 to 11 fathoms.

BUCCINUM CASTANEUM INCISULUM Dall, 1919.

Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 327.

Western Bering Sea.

BUCCINUM PICTURATUM Dall, 1877.

Proc. Cal. Acad. Sci., vol. 7, p. 8; Proc. U. S. Nat. Mus., vol. 24, pl. 37, fig. 8, 1902.

Aleutian Islands eastward to Bristol Bay and Kodiak Island, Alaska, 5 to 60 fathoms.

BUCCINUM SIMULATUM Dall, 1907. **(Plate 10, fig. 4.)**

Smithsonian Misc. Coll., vol. 50, No. 1727, p. 150.

Petrel Bank, Bering Sea, 43 to 54 fathoms. Also northern Japan.

BUCCINUM OCHOTENSE Middendorff, 1848.

Sibirische Reise, p. 235, pl. 10, figs. 1, 2.

Arctic Ocean north of Bering Strait and the Okhotsk Sea.

BUCCINUM SIGMATOPLEURA Dall, 1907. **(Plate 12, fig. 6.)**

Smithsonian Misc. Coll., vol. 50, No. 1727, p. 144.

Commander and Attu Islands, Bering Sea, in 135 fathoms.

BUCCINUM ROSSELLINUM Dall, 1919.

Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 327.

Southeast of Chirikoff Island, Alaska, in 695 fathoms.

BUCCINUM STRIGILLATUM Dall, 1891.

Proc. U. S. Nat. Mus., vol. 14, p. 186; vol. 17, pl. 27, fig. 9, 1894.

Fuca Strait (178 fathoms) to San Diego (822 fathoms) and Guadelupe Island.

BUCCINUM STRIGILLATUM FUCANUM Dall, 1907. **(Plate 12, fig. 12.)**

Smithsonian Misc. Coll., vol. 50, p. 152.

Straits of Fuca and Oregon coast.

BUCCINUM SERICATUM Hancock, 1846.

Ann. Mag. Nat. Hist., vol. 18, p. 328, pl. 4, fig. 7.

Arctic Ocean. Circumboreal.

BUCCINUM NORMALE Dall, 1885.

Rep. Polar Exp. Pt. Barrow, p. 179, pl. 3, fig. 1.

Arctic Ocean from Point Barrow to Kotzebue Sound.

BUCCINUM PHYSEMATUM Dall, 1919.

Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 328.

Bernard Harbor, Arctic coast, west to Point Barrow and south to Bristol Bay, Alaska.

Buccinum angulosum crismatopleura . Dall
1919, Proc. U.S.N. Mus. vol. 56, p. 328. Arctic coast of Alaska.

BUCCINUM ANGULOSUM Gray, 1839.
Zool. Beechey's Voy., p. 127, pl. 36, fig. 6.
Bernard Harbor, Arctic coast, west to Point Barrow and south to vicinity of Bering Strait.

BUCCINUM ANGULOSUM SUBCOSTATUM Dall, 1885.
Rep. Polar Exp. Pt. Barrow, p. 179, pl. 3, fig. 2.
Point Barrow.

BUCCINUM ANGULOSUM TRANSLIRATUM Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 328.
Point Barrow and southward to Bristol Bay.

BUCCINUM FRINGILLUM Dall, 1877.
Proc. Cal. Acad. Sci., vol. 7, p. 9; Conch. Cab., ed. 2, pl. 91, fig. 9, 1883.
North end of Nunivak Island, Bering Sea.

BUCCINUM TENELLUM Dall, 1883.
Conch. Cab., ed. 2, p. 88, pl. 91, fig. 8; Proc. U. S. Nat. Mus., vol. 24, p. 19, pl. 39, fig. 9.
Sea Horse Islands, Arctic Ocean, south to the Aleutian Islands.

BUCCINUM BAERI Middendorff, 1848.
Mal. Rossica, vol. 2, p. 148, pl. 6, figs. 7, 8.
Commander, Aleutian, and Kodiak Islands.

BUCCINUM BAERI MÖRCHIANUM Fischer, 1858.
Journ. de Conchyl., vol. 7, p. 299, pl. 10, fig. 2.
All coasts of Bering Sea south of the Pribilof Islands and eastward to Kodiak, Forrester Island, Alaska, and Port Simpson, British Columbia. Also in the Kuril Islands.

BUCCINUM FISCHERIANUM Dall, 1871.
Amer. Journ. Conch., vol. 7, p. 106, pl. 16, fig. 13.
St. George Island, Pribilof group, Bering Sea.

BUCCINUM TENEBROSUM Hancock, 1846, variety?
Ann. Mag. Nat. Hist., vol. 18, p. 327.
Bering Strait. Circumboreal.

BUCCINUM CILIATUM Fabricius, 1780.
Fauna Grönl., p. 401; Conch. Cab., ed. 2, pl. 78, figs. 5, 8, 1883.
Circumboreal. From Point Barrow, Arctic Ocean, south to the Aleutian Islands and eastward to the Shumagins. On the Atlantic from Greenland to the Newfoundland banks.

BUCCINUM OVULUM Dall, 1894.
Proc. U. S. Nat. Mus., vol. 17, p. 707, pl. 30, fig. 6.
Amukhta Pass, Aleutians, in 248 fathoms.

BUCCINUM ALEUTICUM Dall, 1894.
Proc. U. S. Nat. Mus., vol. 17, p. 706, pl. 27, fig. 7.
Near Unimak Island, 59 fathoms.

BUCCINUM PERCRASSUM Dall, 1881.
Proc. U. S. Nat. Mus., vol. 9, p. 216; Conch. Cab., ed. 2, pl. 91, fig. 5.
Arctic Ocean north of Bering Strait.

BUCCINUM CHISHIMANUM Pilsbry, 1904.
Nautilus, vol 18, p. 87; Proc. Acad. Nat. Sci. Phila., 1905, pl. 3, fig. 20.
Bering Island, Bering Sea. Also Japan.

Genus VOLUTHARPA Fischer, 1856.

VOLUTHARPA PERRYI Jay, 1855.
Rep. Japan Exp., p. 295, pl. 5, figs. 13 to 15.
St. Paul Island, Bering Sea (Palmer). Also Japan.

VOLUTHARPA AMPULLACEA Middendorff, 1848.
Sibirische Reise, p. 237, pl. 17, figs. 1–3.
Bering Strait to Fuca Strait.

Family COLUBRARIIDAE.

Genus COLUBRARIA Schumacher, 1817.

COLUBRARIA, species (fragment).
Off La Jolla, San Diego County, California, in 199 fathoms.

Genus ENGINA Gray, 1839.

ENGINA CARBONARIA Reeve, 1846.
Conch. Iconica, *Ricinula*, fig. 22.
San Pedro, California, to Panama and the Galapagos Islands.
Manta, Ecuador.

Family ALECTRIONIDAE.

Genus ALECTRION Montfort, 1810.

Subgenus SCHIZOPYGA Conrad, 1850.

SCHIZOPYGA FOSSATA Gould, 1849.
Proc. Boston Soc. Nat. Hist., vol. 3, p. 152.—TRYON, Man., vol. 4, pl. 17, fig. 316.
Vancouver Island, south to Cerros Island, Lower California.

SCHIZOPYGA CALIFORNIANA Conrad, 1856. (Plate 11, fig. 4.)
Proc. Acad. Nat. Sci. Phila., p. 315; Pacific R. R. Reps., vol. 6, pl. 2, fig. 1.
Coast of Oregon south to San Ignacio Lagoon, Lower California. Also Pleistocene. Magdalena Bay, H.H.

SCHIZOPYGA MENDICA Gould, 1849.
Proc. Boston Soc. Nat. Hist., vol. 3, p. 155; Rep. U. S. Expl. Exp. Moll., pl. 19, fig. 331.
Kodiak Island, Alaska, south to Magdalena Bay, Lower California.

SCHIZOPYGA COOPERI Forbes, 1850.
Proc. Zool. Soc., p. 273, pl. 11, fig. 4.
Puget Sound to San Diego, California. Also Miocene.

SCHIZOPYGA CERRITENSIS Arnold, 1903.
Pal. San Pedro, p. 231, pl. 4, fig. 1.
Long Beach, California, to the Gulf of California. Also Pliocene.

Blank Inlet, Gravina Id. Willett.

Add: Columbella fuscata Sowerby, 1832.
P.Z.S. 1832, p. 117. Thes. Columbella, p. 114. pl. 36, f. 21, 25, 1847.
La Jolla, Cal. (Orcutt), to Ecuador.

SCHIZOPYGA PERPINGUIS Hinds, 1844.
Zool. *Sulphur's* Voy., p. 36, pl. 9, figs. 12, 13.
Puget Sound to Cerros Island, Lower California.

Subgenus Zeuxis H. and A. Adams, 1853.

ZEUXIS INSCULPTUS Carpenter, 1864.
Proc. Cal. Acad. Sci., vol. 3, p. 223.—Tryon, Man., vol. 4, pl. 12, fig. 154.
Point Arena, California, to Cerros Island, Lower California.

ZEUXIS INSCULPTUS EUPLEURA Dall, 1916.
Proc. U. S. Nat. Mus., vol. 51, No. 2166, p. 576.
San Simeon, California, to Cerros Island, Lower California.

ZEUXIS NODICINCTUS Adams, 1851.
Proc. Zool. Soc., p. 110.
San Diego, California, to Panama and the Galapagos Islands.

ZEUXIS NODULIFERUS Philippi, 1848.
Zeitschr. Mal., p. 136; Abb. u. Beschr., *Buccinum*, pl. 1, fig. 3.
San Diego, California, to the Gulf of California.

ZEUXIS TEGULA Reeve, 1853.
Conch. Icon., *Nassa*, fig. 98.
San Francisco to San Diego, California. San Ignacio Lagoon, L. Cal, H. H.

Subgenus Ilyanassa Stimpson, 1865.

ILYANASSA OBSOLETA Say, 1822.
Journ. Acad. Nat. Sci. Phila., vol. 2, p. 232.—Gould, Inv. Mass., pl. 15, fig. 210.
San Francisco, California, introduced with oysters from Atlantic Coast.

Family COLUMBELLIDAE.

Genus ANACHIS H. and A. Adams, 1853.

ANACHIS PENICILLATA Carpenter, 1865. 4/
Ann. Mag. Nat. Hist., ser. 3, vol. 15, p. 398.—Tryon, Man., vol. 5, pl. 58, fig. 46.
Santa Barbara, California, to Gulf of California. Fossil, San Pedro.

ANACHIS SUBTURRITA Carpenter, 1866. 4/
Proc. Cal. Acad. Sci., vol. 3, p. 223.—Tryon, Man., vol. 5, pl. 58, fig. 47.
San Pedro to San Diego, California. S. Coronado Id. Baker

Genus COLUMBELLA Lamarck, 1799.

Subgenus Alia H. and A. Adams, 1853.

ALIA TUBEROSA Carpenter, 1865. 4/
Ann. Mag. Nat. Hist., ser. 3, vol. 15, p. 398.—Tryon, Man., vol. 5, pl. 50, figs. 40, 41.
Forrester Island, Alaska, to Gulf of California.

ALIA GAUSAPATA Gould, 1850.
Proc. Boston Soc. Nat. Hist., vol. 3, p. 170; Rep. U. S. Expl. Exp. Moll., pl. 19, fig. 337, 1852.
Port Etches, Alaska, to San Diego, California. S. Hippolito Pt. L. Cal. Hst.

ALIA CARINATA Hinds, 1844.
Zool. Voy. *Sulphur*, Moll., p. 39, pl. 10, figs. 15–16.
San Francisco Bay to Cape San Lucas.

ALIA CARINATA HINDSI (Gaskoin) Reeve, 1858.
Conch. Icon. *Columbella*, fig. 143.
Monterey to San Diego, California.

ALIA CARINATA CALIFORNIANA Gaskoin, 1852.
Proc. Zool. Soc., p. 12.—Arnold, Pal. San Pedro, pl. 10, fig. 9, 1903.
Forrester Island, Alaska, to Salina Cruz, Mexico.

ALIA CALLIMORPHA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 330.
San Diego, California, to Magdalena Bay, Lower California.

ALIA CASCIANA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 300.
La Jolla, San Diego County, California.

Subgenus Astyris H. and A. Adams, 1853.

ASTYRIS ROSACEA Gould, 1840.
Amer. Journ. Sci., vol. 38, p. 197; Inv. Mass., p. 311, pl. 13, fig. 195, 1841.
Icy Cape, Arctic Ocean, south to Peril Straits, Alaska. Circumboreal.

ASTYRIS AMIANTIS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 331.
Kyska Harbor, Aleutian Islands, Alaska.

ASTYRIS PERMODESTA Dall, 1890.
Proc. U. S. Nat. Mus., vol. 12, p. 327, pl. 5, fig. 4.
Unalaska, Aleutian Islands, south to San Diego, California, in deep water.

ASTYRIS AURANTIACA Dall, 1871.
Amer. Journ. Conch., vol. 7, p. 115, pl. 15, fig. 13.
Monterey, California, to Magdalena Bay, Lower California.

ASTYRIS HYPODRA Dall, 1916. (Plate 6, fig. 10.)
Nautilus, vol. 30, No. 3, p. 27; Proc. Cal. Acad. Sci., vol. 5, pl. 1, fig. 5.
Puget Sound to Puerto Libertad, West Mexico.

Genus NITIDELLA Swainson, 1840.

NITIDELLA GOULDII Carpenter, 1857.
Proc. Zool. Soc., p. 208.
Kodiak, Alaska, to San Diego, California. S. Martin Id. L. Cal. Baker

?NITIDELLA LUCULENTA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 331.
Fuca Strait to Coronado Islands.

Barkley Sd. B.C.

Manuel Lagoon, L. Cal. H. coll.

Nautilus. vol. 30, no. 3, p. 27. July.

Genus AESOPUS Gould, 1860.

AESOPUS EURYTOIDES Carpenter, 1864.
Ann. Mag. Nat. Hist., ser. 3, vol. 14, p. 47.
San Diego, California, to Panama.

AESOPUS CHRYSALLOID$\overset{ll}{\text{E}}$S Carpenter, 1886.
Proc. Cal. Acad. Sci., vol. 3, p. 223.—ARNOLD, Pal. Cal., pl. 5, fig. 8.
San Pedro to San Diego, California.

AESOPUS SANCTUS Dall, 1919.
Proc. Biol. Soc. Wash., vol. 32, p. 250.
Todos Santos Bay, Lower California.

AESOPUS MYRMECOÖN Dall, 1916.
Nautilus, vol. 30, No. 3, p. 27.
San Pedro to Point Abreojos, Lower California.

AESOPUS GOFORTHI Dall, 1912. (Plate 9, fig. 4.)
Nautilus, vol. 25, No. 11, p. 127.
Monterey, California (Goforth).

Genus AMPHISSA H. and A. Adams, 1853.

AMPHISSA COLUMBIANA Dall, 1916. (Plate 6, fig. 9; plate 11, fig. 9.)
Nautilus, vol. 30, No. 3, p. 27; Amer. Journ. Conch., vol. 7, pl. 16, fig. 9, 1871.
Chiachi Islands, Alaska, to San Pedro, California.

AMPHISSA VERSICOLOR Dall, 1871.
Amer. Journ. Conch., vol. 7, p. 113, pl. 16, figs. 10, 11.
Oregon coast to Cerros Island, Lower California.

AMPHISSA VERSICOLOR INCISA Dall, 1919. (Plate 11, fig. 10.) 6/
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 331.
Laguna Beach to San Diego, California.

AMPHISSA VERSICOLOR CYMATA Dall, 1916.
Nautilus, vol. 30, No. 3, p. 27.
Monterey, California.

AMPHISSA VERSICOLOR LINEATA Stearns, 1872.
Proc. Cal. Acad. Sci., vol. 4, p. 322, pl. 1, fig. 8.
Monterey, California.

AMPHISSA RETICULATA Dall, 1916.
Nautilus, vol. 30, No. 3, p. 27.
Port Althorp, Alaska, to San Diego, California.

AMPHISSA UNDATA Carpenter, 1864.
Suppl. Rep. Brit Assoc, p. 148; Proc. Cal. Acad. Sci., vol. 3, p. 158.—KEEP, West Coast Shells, fig. 163.
Monterey, California, to Cerros Island, Lower California.

AMPHISSA BICOLOR Dall, 1892.
Proc. U. S. Nat. Mus., vol. 15, p. 213, pl. 20, fig. 4.
Farallones Islands to San Diego, California, in deep water.

Family MURICIDAE.

Subfamily Muricinae.

Genus MUREX Linnaeus, 1758.

Subgenus Alipurpura Bayle, 1884.

ALIPURPURA RHYSSA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 332.
Santa Barbara Islands, California, to Ballenas Lagoon, Lower California.

ALIPURPURA ERINACEOIDES Valenciennes, 1832.
Humboldt and Bonpland, Voy. Moll., vol. 2, p. 302.
San Diego, California, to Panama.

ALIPURPURA TRIALATA Sowerby, 1841.
Proc. Zool. Soc., p. 143 (not Kiener); Conch. Ill., *Murex*, fig. 18.
Bodega Bay, California, to Todos Santos Bay, Lower California.

Subgenus Pteropurpura Jousseaume, 1880.

PTEROPURPURA CARPENTERI Dall, 1899. **(Plate 13, fig. 5.)**
Nautilus, vol. 12, No. 12, p. 138; Proc. U. S. Nat. Mus., vol. 24, No. 1264, pl. 34, fig. 9, 1902.
Point Conception to San Diego, California. Farallones, Arnheim.

PTEROPURPURA CARPENTERI TREMPERI (Hemphill) Dall, 1910.
Nautilus, vol. 24, No. 8, p. 96; Trans. San Diego Soc. Nat. Hist., vol. 1, No. 3, fig. 1, p. 100, 1911.
Newport Bay and San Pedro, California, in 35 fathoms.

PTEROPURPURA PETRI Dall, 1900.
Nautilus, vol. 14, No. 4, p. 37; Proc. U. S. Nat. Mus., vol. 24, pl. 34, fig. 7, 1902.
Santa Barbara to San Pedro, California.

Subgenus Triremis Bayle, 1884.

TRIREMIS GEMMA Sowerby, 1879.
Thes. Conch., *Murex*, p. 32, pl. 22, fig. 214.
Santa Barbara, California, to Cerros Island, Lower California.

TRIREMIS SANTAROSANA Dall, 1905. **(Plate 13, fig. 3, 4.)**
Nautilus, vol. 19, No. 2, p. 14.
Santa Barbara Islands, California, to Cerros Island, Lower California.

TRIREMIS FESTIVA Hinds, 1843.
Zool. Voy. *Sulphur*, Moll., p. 9, pl. 3, figs. 13, 14.
Santa Barbara, California, to Cerros Island, Lower California.

Genus PURPURA Martyn, 1784.

PURPURA FOLIATA Martyn, 1784.
Ill. Nondescript Shells, table 2, pl. 66.
Sitka, Alaska, to San Diego, California.

S. Hippolitō Pt. L. Cal. H. H. coll.

S. Ignacio Lagoon, L. Cal. H. coll.

Tritonalia japonica Dkr. from oyster beds at Bellingham Bay, fide Oldroyd. Imported.

PURPURA NUTTALLII Conrad, 1837.
Journ. Acad. Nat. Sci. Phila., vol. 7, p. 264, pl. 20, fig. 22.
Monterey, California, to Scammon Lagoon, Lower California.

PURPURA NUTTALLII ACICULIGER Valenciennes, 1846.
Voy. *Venus*, Atlas, pl. 10, fig. 1.
San Pedro, California, to Scammon Lagoon, Lower California.

PURPURA NUTTALLII ALBESCENS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 332.
San Pedro, California, to San Quentin Bay, Lower California.

PURPURA NUTTALLII ALBOFASCIATA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 332.
San Pedro to San Diego, California.

Genus TRITONALIA Fleming, 1828.

TRITONALIA GRACILLIMA Stearns, 1871.
Conch. Mem., No. 6, p. 1; Amer. Journ. Conch., vol. 7, pl. 14, fig. 15.
Monterey, California, to San Geronimo, Island, Lower California.

TRITONALIA GRACILLIMA OBESA (Stearns MS.) Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 333.
Monterey, California, to Gulf of California.

TRITONALIA LURIDA Middendorff, 1849.
Mal. Rossica, p. 150, pl. 4, figs. 4, 5; Proc. U. S. Nat. Mus., vol .15, pl. 20, fig. 7, 1892.
Forrester Island, Alaska, to Catalina Island, California.

TRITONALIA LURIDA ASPERA Baird, 1863. **(Plate 13, fig. 12.)**
Proc. Zool. Soc., p. 72.
Sitka, Alaska, to San Pedro, California.

TRITONALIA LURIDA MUNDA Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 663; Proc. U. S. Nat. Mus., vol. 15, pl. 20, fig. 8, 1892.
Middleton Island, Alaska, to San Diego, California.

TRITONALIA LURIDA ROTUNDA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 333.
Moss Beach, to San Luis Obispo, California.

TRITONALIA SQUAMULIFERA Carpenter, 1868.
Gabb, Pal. Cal., vol. 2, p. 44.
Santa Barbara to San Pedro, California.

TRITONALIA FUSCONOTATA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 333.
Monterey to Catalina Island, California.

TRITONALIA POULSONI Carpenter, 1865.
Journ. de Conchyl., ser. 3, vol. 5, p. 148.—Tryon, Man., vol.II, pl. 38, fig. 475.
Santa Barbara, California, to Magdalena Bay, Lower California.

TRITONALIA PAINEI Dall, 1903. **(Plate 6, fig. 1.)**
Proc. Biol. Soc. Wash., vol. 16, p. 174.
Dundas Bay, Alaska, to San Diego, California.

TRITONALIA CIRCUMTEXTA Stearns, 1871.
Conch. Mem., No. 6, p. 1; Amer. Journ. Conch., vol. 7, pl. 14, fig. 14.
Trinidad to San Pedro, California. S. Martin Id. L. Cal. Baker

TRITONALIA CIRCUMTEXTA CITRICA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 334.
Santa Barbara Islands, to Scammon Lagoon, Lower California.

2/ **TRITONALIA INTERFOSSA Carpenter, 1864.** **(Plate 11, fig. 8.)**
Proc. Acad. Nat. Sci. Phila., p. 64.—Tryon, Man., vol. ~~1~~, pl. 39, fig. 484.
Semidi Islands, Alaska, to San Diego, California.

1/ **TRITONALIA INTERFOSSA ALPHA (Carpenter) Dall, 192~~0~~.** **(Plate 13, fig. 9.)**
This Bulletin.
Vancouver Island to Mendocino County, California.

TRITONALIA INTERFOSSA BETA (Carpenter) Dall, 1919.
Proc. Biol. Soc. Wash., vol. 32, p. 250.
Monterey, California. Fossil San Pedro.

TRITONALIA INTERFOSSA CLATHRATA (Stearns) Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 334.
Monterey to Catalina Island, California.

TRITONALIA INTERFOSSA MINOR Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 334.
Catalina Island, California.

TRITONALIA INTERFOSSA ATROPURPUREA (Carpenter) Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 334.
Neah Bay, Washington, to San Diego, California.

TRITONALIA FOVEOLATA Hinds, 1843.
Proc. Zool. Soc., p. 127; Zool. Voy. *Sulphur*, Moll., pl. 3, figs. 15, 16.
Monterey to San Diego, California. Magdalena Bay, Hinds.

TRITONALIA STEARNSI Hemphill, 1911.
Trans. San Diego, Soc. Nat. Hist., vol. 1, No. 3, p. 100.
Monterey, California.

TRITONALIA SCLERA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 334.
Coast of Washington to Venice, California.

TRITONALIA SUBANGULATA Stearns, 1873.
Conch. Mem., No. 12, p. 5, pl. 1, fig 4; Proc. Cal. Acad. Sci., vol. 5, p. 81, pl. 1, fig. 4.
Monterey to Santa Barbara Islands.

TRITONALIA MICHAELI Ford, 1888.
Proc. Acad. Nat. Sci. Phila., 1888, p. 188, figs.
Orcas Island, Washington, to Gulf of California. Pt. Reyes, White.

5/ **TRITONALIA FRASERI, Oldroyd, 1920.**
Nautilus, vol. 33, p. 13~~6~~, pl. 4, figs. 1, 2.
Departure Bay, Vancouver Island.

TRITONALIA BARBARENSIS Gabb, 1866. **(Plate 6, fig. 5; plate 15, fig. 11.)**
Proc. Cal. Acad. Sci., vol. 3, p. 183.
British Columbia to the Santa Barbara Islands, California.

Pt. S. Tomas. L. Cal. H. coll.

Rapana thomasii Crosse, from oyster beds at Bellingham Bay, fide Oldroyd. Imported.

TRITONALIA EPIPHANEA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 335.
San Pedro and Catalina Island, California. Pt. Reyes, White.

? TRITONALIA TRACHEIA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 335.
Sitka, Alaska, in 15 fathoms.

Genus UROSALPINX Stimpson, 1865.

UROSALPINX CINEREUS Say, 1822.
Journ. Acad. Nat. Sci. Phila., vol. 2, p. 236; Amer. Conch., vol. 3, pl. 29, 1831.
San Francisco Bay, to San Pedro, California, introduced with Atlantic seed oysters.

Genus EUPLEURA H. and A. Adams, 1853.

EUPLEURA GRIPPI Dall, 1911. **(Plate 5, fig. 1.)**
Nautilus, vol. 25, No. 8, p. 87.
San Diego, California, in 15 fathoms.

Genus TROPHON Montfort, 1810.

Subgenus AUSTROTROPHON Dall, 1903.

AUSTROTROPHON TRIANGULATUS Carpenter, 1864.
Proc. Cal. Acad. Sci., vol. 7, p. 224; Proc. U. S. Nat. Mus., vol. 14, pl. 5, figs. 1, 3, 6, 1891.
Catalina Island and San Pedro, California.

Subgenus NEPTUNEA (Bolten, part, 1798) Dall, 1902.

NEPTUNEA DALLI Kobelt, 1878.
Conch. Cab., ed. 2, *Trophon*, p. 275; Proc. U. S. Nat. Mus., vol. 9, pl. 4, fig. 6, 1886.
Arctic Ocean to Fuca Strait.

NEPTUNEA DALLI ALTA Dall, 1902.
Proc. U. S. Nat. Mus., vol. 24, p. 548.
Bering Sea.

NEPTUNEA SCITULA Dall, 1891. **(Plate 13, fig. 6.)**
Proc. U. S. Nat. Mus., vol. 14, p. 188; vol. 17, pl. 27, fig. 5, 1894.
Pribilof Islands to Unalaska Island, Bering Sea.

NEPTUNEA DISPARILIS Dall, 1891.
Proc. U. S. Nat. Mus., vol. 14, p. 189; vol. 17, pl. 27, fig. 4, 1894.
Fuca Strait to Columbia River entrance.

NEPTUNEA ROTUNDATA Dall, 1902. **(Plate 15, fig. 3.)**
Proc. U. S. Nat. Mus., vol. 24, No. 1264, p. 547.
Off Pribilof Islands, Bering Sea.

NEPTUNEA ELEGANTULA Dall, 1907. **(Plate 6, fig. 6.)**
Smithsonian Misc. Coll., vol. 50, No. 1727, p. 165.
Aleutian Islands, Alaska.

NEPTUNEA BERINGI Dall, 1902. **(Plate 10, fig. 6.)**
Proc. U. S. Nat. Mus., vol. 24, No. 1264, p. 544.
Icy Cape, Arctic Ocean, to Puget Sound. Japan.

NEPTUNEA CEPULA Sowerby, 1880.

Thes. Conch., *Trophon*, p. 61, pl. 404, fig. 14, pl. 405, fig. 27.

Bering Sea and Aleutian Islands. Pleistocene of North Japan at Volcano Bay.

NEPTUNEA CYMATA Dall, 1902.

Proc. U. S. Nat. Mus., vol. 24, No. 1264, p. 548.

Bering Sea.

NEPTUNEA ITHITOMA Dall, 1919.

Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 337.

Lynn Canal, Alaska.

NEPTUNEA ALASKANA Dall, 1902.

Proc. U. S. Nat. Mus., vol. 24, No. 1264, p. 545.

Off Unalaska, Bering Sea, in 225 fathoms.

NEPTUNEA AVALONENSIS Dall, 1902. (Plate 8, fig. 8.)

Proc. U. S. Nat. Mus., vol. 24, No. 1264, p. 546.

Catalina Island, California, to San Diego.

NEPTUNEA EUCYMATA Dall, 1902. (Plate 15, fig. 7.)

Proc. U. S. Nat. Mus., vol. 24, No. 1264, p. 547.

Off San Diego, California.

NEPTUNEA BENTLEYI Dall, 1908.

Proc. U. S. Nat. Mus., vol. 34, No. 1610, p. 249.

Off San Diego, California, in 20 fathoms.

NEPTUNEA STAPHYLINA Dall, 1919.

Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 338.

Sitka, Alaska, to the Coronado Islands.

NEPTUNEA CALLICERATA Dall, 1919.

Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 338.

Monterey to San Diego, California.

NEPTUNEA PACIFICA Dall, 1902. (Plate 11, fig. 5.)

Proc. U. S. Nat. Mus., vol. 24, No. 1264, p. 544.

Arctic Ocean southward, on the west to Kamchatka and on the east in deep water to Acapulco, Mexico.

NEPTUNEA MULTICOSTATA Eschscholtz, 1829. (Plate 13, fig. 1.)

Zool. Atlas, pt. 2, p. 11, pl. 9, fig. 4.

Nunivak Island, Bering Sea, to San Pedro, California. Also Northern Japan.

NEPTUNEA PEREGRINA Dall, 1902. (Plate 8, fig. 5.)

Proc. U. S. Nat. Mus., vol. 24, No. 1264, p. 543.

Catalina Island, California, in 16 fathoms.

NEPTUNEA MACOUNI Dall, 1910.

Canadian Geol. Surv., Mem. 14 N, No. 1143, p. 12, pl. 1, fig. 7.

Port Althorp, Alaska, to Barkley Sound, British Columbia.

NEPTUNEA ORPHEUS Gould, 1849. (Plate 6, fig. 7.)

Victoria, British Columbia, and off the Columbia River, Oregon.

Proc. Boston Soc. Nat. Hist., vol. 3, p. 142; Rept. U. S. Expl. Exp., Moll., fig. 285, 1852.

3. Add Bull. Am. Pal. VIII, no. 36, p. 5, pl. 1, figs. 6-9, 1921.

Add: Thais biserialis Blainville, 1832.
Nouv. Ann. du Mus. (Paris) p. 50, pl. 11, fig. 11.
La Jolla, Cal. (Orcutt). to Peru.

NEPTUNEA SMITHI Dall, 1902. (Plate 13, fig. 8.)
Proc. U. S. Nat. Mus., vol. 24, No. 1264, p. 542.
Pribilof Islands, Bering Sea, to Santa Barbara Islands, California.

NEPTUNEA STUARTI E. A. Smith, 1880.
Proc. Zool. Soc., p. 481, pl. 48, fig. 6.
Shumagin Islands, Alaska, to San Diego, California.

Section TROPHONOPSIS Bucquoy, Dautzenberg, and Dollfus, 1882.

3. **NEPTUNEA TENUISCULPTA Carpenter, 1866.** (Plate 11, figs. 11, 12.)
Ann. Mag. Nat. Hist., ser. 3, vol. 17, p. 277.—Tryon, Man., vol. 2, p. 139, pl. 33, fig. 359, 1880.
Southeastern Bering Sea to Todos Santos Bay, Lower California.

NEPTUNEA CERRITENSIS Arnold, 1903.
Pal. San Pedro, p. 249, pl. 6, fig. 6.
Cerritos and San Pedro, California. Pleistocene.

NEPTUNEA PEDROANA Arnold, 1903.
Pal. San Pedro, p. 251, pl. 6, fig. 12.
San Pedro, California. Pleistocene and Pliocene.

NEPTUNEA LASIA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 338.
Off Point Pinos, California, in 495 fathoms.

NEPTUNEA APOLYONIS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 337.
Off Santa Barbara Islands, California, in 216 to 339 fathoms.

NEPTUNEA KAMCHATKANA Dall, 1902. (Plate 10, fig. 7.)
Proc. U. S. Nat. Mus., vol. 24, No. 1264, p. 541.
Western Bering Sea, 100 fathoms.

NEPTUNEA TRIPHERA Dall, 1902. (Plate 15, figs. 8, 9.)
Proc. U. S. Nat. Mus., vol. 24, No. 1264, p. 545.
Fuca Strait to San Diego, California, and off Piedras Blancas, Lower California, in 485 fathoms.

NEPTUNEA TOLOMIA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 337.
San Miguel Island, California, in 376 fathoms.

Subfamily Thaisinae.

Genus THAIS Bolten, 1798.

Subgenus Nucella Bolten, 1798.

NUCELLA LAMELLOSA Gmelin, 1792.
Syst. Nat., vol. 7, p. 3498; Proc. U. S. Nat. Mus., vol. 49, p. 563, pl. 74, figs. 5–8.
Port Clarence, Bering Strait and southward on the west to Sado Island, Japan Sea, on the east to the Aleutian Islands, and Santa Barbara, California. Pliocene and Pleistocene of California and Oregon.

NUCELLA LAMELLOSA FRANCISCANA Dall, 1915.
Proc. U. S. Nat. Mus., vol. 49, p. 565, pl. 74, fig. 6.
San Francisco Bay, California.

NUCELLA LAMELLOSA HORMICA Dall, 1915.
Proc. U. S. Nat. Mus., vol. 49, p. 565, pl. 74, fig. 8.
Inner Harbor of Sitka, Alaska. Pt. Reyes Cal. White.

NUCELLA LAMELLOSA NEPTUNEA Dall, 1915.
Proc. U. S. Nat. Mus., vol. 49, p. 565. = Neptunea
Cook's Inlet, Alaska.

NUCELLA LAMELLOSA CYMICA Dall, 1915.
Proc. U. S. Nat. Mus., vol. 49, p. 565, pl. 74, fig. 5.
Surf-beaten rocks, coast of Washington.

NUCELLA LAMELLOSA SITKANA Dall, 1915.
Proc. U. S. Nat. Mus., vol. 49, p. 566, pl. 74, fig. 4.
Inner Harbor, Sitka, Alaska.

NUCELLA LIMA Martyn, 1784.
Ill. Nondescript Shells, table 2, pl. 46; Proc. U. S. Nat. Mus., vol. 49, pl. 75, figs. 4–6, 1915.
Kotzebue Sound, Arctic Ocean, south on the west to Bering Island, the Kuril Islands and Northern Japan, on the east to the Aleutian Islands, Alaska, Monterey, and San Diego, California, and Cerros Island, Lower California.

NUCELLA CANALICULATA Duclos, 1832.
Ann. Sci. Nat., vol. 26, p. 104, pl. 1, fig. 1.
The whole Aleutian chain, eastward to Sitka and southward to Monterey.

NUCELLA CANALICULATA ANALOGA Forbes, 1850.
Proc. Zool. Soc., p. 273, pl. 11, fig. 12.
California. (Forbes.)

NUCELLA CANALICULATA COMPRESSA Dall, 1915.
Proc. U. S. Nat. Mus., vol. 49, p. 569, pl. 74, fig. 2.
Monterey, California.

NUCELLA EMARGINATA Deshayes, 1839.
Revue Zool. Soc. Cuv., p. 360.—Guérin, Mag. de Zool., 1841, pl. 25.
Bering Island and the Okhotsk Sea on the west; on the east from Hagmeister Island, Bering Sea, and southward to California, Mazatlan, and Topolobampo, Mexico.

NUCELLA EMARGINATA OSTRINA Gould, 1852.
Rept. U. S. Expl. Exp., Moll., p. 244, pl. 18, figs. 310 *a–b*.
Tillamook, Oregon. Ellamar, Alaska and Pt of Rocks, Mexico, Baker

NUCELLA EMARGINATA PROJECTA Dall, 1915.
9/ Proc. U. S. Nat. Mus., vol. 4~~4~~, p. 571, pl. 75, fig. 3.
Sitka, Alaska. Forrester Id. Willett.

Genus ACANTHINA Fischer, 1807.

Subgenus Acanthinucella Cooke, 1918.

ACANTHINUCELLA SPIRATA Blainville, 1832.
Nouv. Ann. du Mus. Paris, vol. 1, p. 252, pl. 12, fig. 8.
Puget Sound to San Diego, California, and Socorro Island.

ACANTHINUCELLA SPIRATA PUNCTULATA Sowerby, 1835.
Conch. Illustr. *Monoceros*, fig. 3.
Monterey, California, to San Tomas, Lower California, and Socorro.

ACANTHINUCELLA SPIRATA AURANTIA Dall, 1908.
Proc. U. S. Nat. Mus., vol. 34, No. 1610, p. 248.
Newport and San Pedro, California.

ACANTHINUCELLA PAUCILIRATA Stearns, 1871.
Conch. Memo., No. 6, p. 1; Amer. Journ. Conch., vol. 7, p. 167, pl. 14, fig. 16.
San Pedro, California, to Cerros Island, Lower California.

Subgenus ACANTHINA s. s.

ACANTHINA LUGUBRIS Sowerby, 1822.
Gen. Shells, *Monoceros*, fig. 3; Conch. Ill., fig. 11, 1835.
San Diego, California (Ritchie), to Magdalena Bay, Lower California, and the Galapagos Islands.

Genus FORRERIA Jousseaume, 1880.

FORRERIA BELCHERI Hinds, 1843.
Proc. Zool. Soc., p. 127; Zool. Voy. *Sulphur*, Moll., pl. 2, figs. 1–3, 1844.
San Pedro, California, to Scammon Lagoon, Lower California.

Family CORALLIOPHILIDAE.

Genus CORALLIOPHILA H. and A. Adams, 1853.

Subgenus PSEUDOMUREX Monterosato, 1872.

PSEUDOMUREX COSTATA Blainville, 1832.
Nouv. Ann. du Mus. Paris, vol. 1, p. 232, pl. 11, fig. 8.
San Miguel Island, California, to Panama.

PSEUDOMUREX HINDSII Carpenter, 1857.
Mazatlan Cat., p. 205; Zool. Voy. *Sulphur*, Moll., pl. 1, figs. 16, 17.
Point Conception, California, to San Diego, and Panama.

PSEUDOMUREX KINCAIDI Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 339.
Puget Sound (Kincaid).

Suborder STREPTODONTA.

Superfamily PTENOGLOSSA.

Family EPITONIIDAE.

Genus EPITONIUM Bolten, 1798.

Subgenus OPALIA H. and A. Adams, 1853.

OPALIA WROBLEWSKII Mörch, 1876.
Journ. Acad. Nat. Sci. Phila., ser. 2, vol. 8, p. 190; Rept. U. S. Expl. Exp., Moll., p. 207, 1852.—KEEP, West Coast Shells, p. 182, fig. 173, 1911.
Forrester Island, Alaska, to San Diego, California.

OPALIA EVICTA De Boury, 1919.
6 Journ. de Conchyl., vol. ~~4~~4, No. 1, p. 36.
Forrester Island, Alaska, to Magdalena Bay, Lower California.

Subgenus DENTISCALA De Boury, 1886.

DENTISCALA CRENIMARGINATA Dall, 1917.
Proc. U. S. Nat. Mus., vol. 53, p. 473.
Monterey, California, to Puerto Libertad, West Mexico.

DENTISCALA NESIOTICA Dall, 1917.
Proc. U. S. Nat. Mus., vol. 53, p. 473.
Catalina Island, California.

Subgenus NODISCALA De Boury, 1889.

NODISCALA SPONGIOSA Carpenter, 1864.
Proc. Cal. Acad. Sci., vol. 3, p. 222; Suppl. Rep. Brit. Assoc., p. 660.
Off Oregon coast in 50 fathoms to Monterey, California.

NODISCALA RETIPOROSA Carpenter, 1864.
Proc. Cal. Acad. Sci., vol. 3, p. 222; Suppl. Rep. Brit. Assoc., p. 660.
Catalina Island, California, to Gulf of California.

Subgenus ACIRSA Mörch, 1857.

ACIRSA BOREALIS (Beck) Lyell, 1839. **(Plate 13, fig. 10.)**
Rising of Sweden, p. 37, pl. 2, figs. 11–12.
Aleutian Islands, Alaska. Circumboreal.

ACIRSA BOREALIS OCHOTENSIS Middendorff, 1849.
Mal. Rossica, vol. 2, p. 98; Sibirische Reise, p. 213, pl. 12, figs. 12–14.
Arctic Ocean near Bering Strait, Bering Sea, and the Okhotsk Sea.

Subgenus BOREOSCALA Kobelt, 1902.

BOREOSCALA GREENLANDICA Perry, 1811.
Conchology, pl. 28, fig. 8.
Arctic Ocean near Point Barrow and southward on the west to northern Japan; on the east to Wrangell, Alaska. Circumboreal. Also Pliocene.

Subgenus ASPEROSCALA De Boury, 1909.

ASPEROSCALA BELLASTRIATA Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 660; Proc. Cal. Acad. Sci., vol. 3, p. 221, 1866.—ARNOLD, Pal. San Pedro, pl. 9, fig. 17.
Monterey to San Diego, California.

ASPEROSCALA LOWEI Dall, 1906. **(Plate 6, fig. 11.)**
Nautilus, vol. 20, No. 4, p. 44.
Catalina Island, California.

ASPEROSCALA COOKEANA Dall, 1917.
Proc. U. S. Nat. Mus., vol. 53, No. 2217, p. 475.
San Diego, California. to Gulf of Cal.

ASPEROSCALA ARNOLDI Dall, 1917.
Proc. U. S. Nat. Mus., vol. 53, No. 2217, p. 475.
San Pedro, California.

ASPEROSCALA LAGUNARUM Dall, 1917.
Proc. U. S. Nat. Mus., vol. 53, No. 2217, p. 477.
Laguna Beach, California.

Subgenus CIRSOTREMA Mörch, 1852.

? CIRSOTREMA MONTEREYENSIS Dall, 1907.
Nautilus, vol. 20, No. 11, p. 128.
Monterey to San Pedro, California.

Subgenus NITIDOSCALA De Boury, 1909.

NITIDOSCALA INDIANORUM Carpenter, 1865.
Ann. Mag. Nat. Hist., ser. 3, vol. 14, p. 28.—TRYON, Man., vol. 9, pl. 14, fig. 48.
Forrester Island, Alaska, to Todos Santos Bay, Lower California.

NITIDOSCALA TINCTA Carpenter, 1865.
Ann. Mag. Nat. Hist., ser. 3, vol. 14, p. 28.—TRYON, Man., vol. 9, pl. 14, fig. 49.
Monterey, California, to the Gulf of California.

NITIDOSCALA FALLACIOSA Dall, 1917.
Proc. U. S. Nat. Mus., vol. 53, No. 2217, p. 478.—KEEP, West Coast Shells, p. 183, fig. 174.
Monterey, California, to Gulf of California.

NITIDOSCALA PERSUTURA Dall, 1917.
Proc. U. S. Nat. Mus., vol. 53, No. 2217, p. 478.
San Diego, California.

NITIDOSCALA SUBCORONATA Carpenter, 186~~6~~. 4/
Proc. Cal. Acad. Sci., vol. 3, p. 221.
Vancouver Island to San Diego, California.

NITIDOSCALA DENSICLATHRATA Dall, 1917.
Proc. U. S. Nat. Mus., vol. 53, No. 2217, p. 478.
Neah Bay, Washington, to San Diego, California.

NITIDOSCALA CREBRICOSTATA Carpenter, 186~~6~~. 4/
Proc. Cal. Acad. Sci., vol. 3, p. 222.
Vancouver Island to Gulf of California.

NITIDOSCALA HEXAGONA Sowerby, 1844.
Proc. Zool. Soc., p. 29; Thes. Conch., vol. 1, p. 98, pl. 33, fig. 67, 1847.
Santa Cruz, California, to Panama.

NITIDOSCALA? TIARA Carpenter, 1856.
Proc. Zool. Soc., p. 164.
Catalina Island, California, to Todos Santos Bay, Lower California. Panama ?

NITIDOSCALA COLUMBIANA Dall, 1917.
Proc. U. S. Nat. Mus., vol. 53, No. 2217, p. 481.
Off Columbia River, Oregon, to Gulf of California. Forrester Id. Willett.

NITIDOSCALA SAWINAE Dall, 1903. (Plate 6, fig. 12.)
Proc. Biol. Soc. Wash., vol. 16, p. 175.
Monterey to Catalina Island. California. Barkley Id. B.C.

NITIDOSCALA CATALINENSIS Dall, 1917.
Proc. U. S. Nat. Mus., vol. 53, No. 2217, p. 481.
Catalina, Island, California.

NITIDOSCALA CALIFORNICA Dall, 1917.
Proc. U. S. Nat. Mus., vol. 53, No. 2217, p. 482.
San Miguel Island, California, to Gulf of California.

NITIDOSCALA RECTILAMINATA Dall, 1907.
Nautilus, vol. 20, No. 11, p. 127; Proc. U. S. Nat. Mus., vol. 53, p. 482.
Monterey, California, to Gulf of California.

NITIDOSCALA CAAMANOI Dall and Bartsch, 1910.
Canada Geol. Surv. Mem. 14 N., No. 1143, p. 13, pl. 1, fig. 1.
Vancouver Island to San Pedro, California.

21/ **NITIDOSCALA REGIOMONTANA Dall, 19~~1~~7.**
Proc. U. S. Nat. Mus., vol. 53, No. 2217, p. 481.
Monterey Bay, in 30 fathoms.

NITIDOSCALA BERRYI Dall, 1907.
Nautilus, vol. 20, No. 11, p. 127.
Monterey to San Diego, California.

NITIDOSCALA INCONSPICUA Sowerby, 1847.
Thes. Conch., vol. 1, p. 90, pl. 33, fig. 53.
Off San Diego, California, in 75 fathoms.

NITIDOSCALA DIEGENSIS Dall, 1917.
Proc. U. S. Nat. Mus., vol. 53, No. 2217, p. 483.
San Diego, California, to the Gulf of California.

Section CRISPOSCALA De Boury, 1909.

NITIDOSCALA CATALINAE Dall, 1908.
Proc. U. S. Nat. Mus., vol. 34, No. 1610, p. 252.
Forrester Island, Alaska, to San Diego, California.

NITIDOSCALA REGUM Dall, 1917.
Proc. U. S. Nat. Mus., vol. 53, No. 2217, p. 484.
Point Reyes to San Diego, California.

NITIDOSCALA TABULATA Dall, 1917.
Proc. U. S. Nat. Mus., vol. 53, No. 2217, p. 483.
San Pedro, California, to Coronado Islands.

NITIDOSCALA ACROSTEPHANUS Dall, 1908.
Proc. U. S. Nat. Mus., vol. 24, No. 1610, p. 251.
Monterey, California, to Coronado Islands. Barkley Sd. Vancouver Id.

Section GLOBISCALA De Boury, 1909.

NITIDOSCALA ORCUTTIANA Dall, 1917.
Proc. U. S. Nat. Mus., vol. 53, No. 2217, p. 484.
San Diego, California.

NITIDOSCALA BARBARINA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 341.
San Diego, California, to Panama.

4. Read: J. bifida Nuttall, 1839,
Jay's Cat, p. 68. Conch. Icon. Janthina fig. 25 b.

NITIDOSCALA ZEPHYRIA Dall, 1917.
Proc. U. S. Nat. Mus., vol. 53, No. 2217, p. 485.
San Diego, California.

Family JANTHINIDAE.

Genus JANTHINA Bolten, 1798.

JANTHINA GLOBOSA Swainson, 1822.
Zool. Ill., ser. 1, vol. 2, pl. 85.
Puget Sound to Gulf of California. Pelagic.

JANTHINA CERULEATA Reeve, 1858.
Conch. Icon., *Janthina*, fig. 7.
San Diego, California. Pelagic.

4. **JANTHINA ~~EXIGUA Lamarck, 1822.~~**
~~Anim. Sans. Vert., ser. 1, vol. 6, p. 206.—TRYON, Man., vol. 9, p. 37, pl. 10, fig. 17.~~
Catalina Island, California, to West Mexico. Pelagic. Monterey, Berry.

Superfamily GYMNOGLOSSA.

Family MELANELLIDAE.

Genus MELANELLA Bowdich, 1822.

Section MELANELLA s. s.

MELANELLA MONTEREYENSIS Bartsch, 1917.
Proc. U. S. Nat. Mus., vol. 53, No. 2207, p. 320, pl. 39, fig. 6.
Trinidad to Monterey Bay, California.

MELANELLA PENINSULARIS Bartsch, 1917.
Proc. U. S. Nat. Mus., vol. 53, No. 2207, p. 320, pl. 39, fig. 4.
San Diego, California, to Magdalena Bay, Lower California.

MELANELLA LASTRA Bartsch, 1917.
Proc. U. S. Nat. Mus., vol. 53, No. 2207, p. 321, pl. 40, fig. 3.
San Pedro, California, to Magdalena Bay, Lower California.

MELANELLA THERSITES Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 659; Ann. Mag. Nat. Hist., ser. 3, vol. 15, p. 396; Proc. U. S. Nat. Mus., vol. 53, No. 2207, pl. 41, figs. 1, 2, 3.
Monterey, California, to San Geronimo Island, Lower California.

MELANELLA COLUMBIANA Bartsch, 1917.
Proc. U. S. Nat. Mus., vol. 53, No. 2207, p. 324, pl. 41, fig. 5.
Baranoff Island, Alaska, to Departure Bay, British Columbia.

MELANELLA COMOXENSIS Bartsch, 1917.
Proc. U. S. Nat. Mus., vol. 53, No. 2207, p. 325, pl. 41, fig. 4.
Comox, Vancouver Island, British Columbia.

MELANELLA MACRA Bartsch, 1917.

Proc. U. S. Nat. Mus., vol. 53, No. 2207, p. 326, pl. 41, fig. 6.

Departure Bay, British Columbia, to Seattle, Washington.

MELANELLA BERRYI Bartsch, 1917.

Proc. U. S. Nat. Mus., vol. 53, No. 2207, p. 326, pl. 42, fig. 3.

Monterey Bay to Catalina Island, California.

MELANELLA GRIPPI Bartsch, 1917.

Proc. U. S. Nat. Mus., vol. 53, No. 2207, p. 327, pl. 42, fig. 5.

San Pedro, California, to Point Abreojos, Lower California.

MELANELLA CATALINENSIS Bartsch, 1917.

Proc. U. S. Nat. Mus., vol. 53, No. 2207, p. 329, pl. 40, fig. 7.

San Rosa Island, California, to San Hipolito Point, Lower California.

Section EULIMA Risso, 1826.

MELANELLA MICANS Carpenter, 1864.

Suppl. Rep. Brit. Assoc., p. 659; Proc. Acad. Nat. Sci. Phila., 1865, p. 63; Proc. U. S. Nat. Mus., vol. 53, p. 303, pl. 34, figs. 1–6.

Vancouver Island to Point Abreojos, Lower California. Also Pleistocene and Pliocene.

MELANELLA MICANS BOREALIS Bartsch, 1917.

Proc. U. S. Nat. Mus., vol. 53, No. 2207, p. 305, pl. 35, fig. 7.

Kodiak Island, Alaska, to Vancouver Island, British Columbia.

MELANELLA RUTILA Carpenter, 1864.

Suppl. Brit. Assoc., p. 659; Proc. Cal. Acad. Sci., vol. 3, p. 221; Proc. U. S. Nat. Mus., vol. 53, No. 2207, pl. 35, figs. 2, 3, 6.

Vancouver Island, British Columbia, to Magdalena Bay, Lower California. Also Pleistocene and Pliocene.

MELANELLA OLDROYDI Bartsch, 1917.

Proc. U. S. Nat. Mus., vol. 53, No. 2207, p. 309, pl. 36, figs. 5, 6, 7.

San Pedro to Point Abreojos, Lower California. Also Pliocene and Pleistocene.

MELANELLA RANDOLPHI Vanatta, 1899.

Proc. Acad. Nat. Sci. Phila., p. 256, pl. 11, figs. 13, 14.

Aleutian Islands to Puget Sound.

MELANELLA CALIFORNICA Bartsch, 1917.

Proc. U. S. Nat. Mus., vol. 53, No. 2207, p. 313, pl. 37, fig. 1.

Catalina Island and San Martin, California.

MELANELLA HEMPHILLI Bartsch, 1917.

Proc. U. S. Nat. Mus., vol. 53, No. 2207, p. 313, pl. 37, fig. 6.

San Diego, California, to Point Abreojos, Lower California.

MELANELLA COMPACTA Carpenter, 1864.

Suppl. Rep. Brit. Assoc., p. 659; Proc. Cal. Acad. Sci., vol. 3, p. 221; Proc. U. S. Nat. Mus., vol. 53, No. 2207, pl. 37, fig. 3.

San Pedro, California, to Point Abreojos, Lower California.

MELANELLA TACOMAËNSIS Bartsch, 1917.

Proc. U. S. Nat. Mus., vol. 53, No. 2207, p. 316, pl. 38, fig. 5.

Tacoma, Washington.

Subgenus SABINELLA Monterosato, 1890.

SABINELLA BAKERI Bartsch, 1917.
Proc. U. S. Nat. Mus., vol. 53, No. 2207, p. 334, pl. 43, fig. 5.
San Diego, California.

SABINELLA PTILOCRINICOLA Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 32, p. 555, pl. 53; vol. 53, p. 335, pl. 44, fig. 2, 1917.
Parasitic on *Ptilocrinus*, in 1,588 fathoms, off British Columbia.

Genus ENTOCOLAX Voight, 1888.

ENTOCOLAX LUDWIGI Voight, 1888.
Zeitschr. Wiss. Zool., vol. 47, p. 658, pl. 41–43.
Bering Sea, parasite of *Myriotrochus*.

Genus CYTHNA Carpenter, 1864.

CYTHNA ALBIDA Carpenter, 1864.
Proc. Cal. Acad. Sci., vol. 3, p. 219.
Southern California. Parasitic on starfishes.

Genus HALIELLA Monterosato, 1873.

HALIELLA ABYSSICOLA Bartsch, 1908.
Proc. U. S. Nat. Mus., vol. 53, No. 2207, p. 336, pl. 43, fig. 8.
In 822 fathoms off San Diego, California, and southward to latitude 27° north, off Point Pablo, Lower California, in 284 fathoms.

HALIELLA LOMANA Dall, 1908.
Proc. U. S. Nat. Mus., vol. 34, p. 253; vol. 53, p. 337, pl. 44, fig. 1.
Off Point Loma, San Diego County, California, in 650 fathoms.

Genus STROMBIFORMIS Da Costa, 1778.

STROMBIFORMIS ALASKENSIS Bartsch, 1917.
Proc. U. S. Nat. Mus., vol. 53, No. 2207, p. 339, pl. 45, fig. 1.
Dutch Harbor, Unalaska, Aleutian Islands.

STROMBIFORMIS CALIFORNICUS Bartsch, 1917.
Proc. U. S. Nat. Mus., vol. 53, No. 2207, p. 340, pl. 45, fig. 5.
Catalina Island, to San Diego, California.

STROMBIFORMIS ALMO Bartsch, 1917.
Proc. U. S. Nat. Mus., vol. 53, No. 2207, p. 342, pl. 46, fig. 5
Santa Rosa Island to San Diego, California.

Genus ACLIS Lovèn, 1846.

Subgenus GRAPHIS Jeffreys, 1869.

GRAPHIS SHEPARDIANA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 342.
San Pedro to San Diego, California.

Subgenus Aclis s. s.

? ACLIS TURRITA Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 657; Proc. Cal. Acad. Sci., vol. 3, p. 219, 1866; Proc. U. S. Nat. Mus., vol. 39, pl. 62, fig. 4.
San Pedro, California. San Diego, Kelsey

? ACLIS OCCIDENTALIS Hemphill, 1894.
Zoë, vol. 4, No. 4, p. 395; Proc. U. S. Nat. Mus., vol. 39, pl. 62, fig. 2.
San Diego, California.

Genus NISO Risso, 1826.

NISO LOMANA Bartsch, 1917.
Proc. U. S. Nat. Mus., vol. 53, No. 2207, p. 350, pl. 49, fig. 4.
Santa Rosa Island to Point Loma, California.

NISO HIPOLITENSIS Bartsch, 1917.
Proc. U. S. Nat. Mus., vol. 53, No. 2207, p. 350, pl. 49, fig. 5.
San Diego, California, to San Hipolito Point, Lower California.

Family PYRAMIDELLIDAE.

Genus PYRAMIDELLA Lamarck, 1799.

Subgenus Longchaeus Mörch, 1875.

LONGCHAEUS ADAMSI Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 546; U. S. Nat. Mus., Bull. 68, p. 21, pl. 1, figs. 6, 6*a*, 1909.
Monterey, California, to Mazatlan, Mexico.

LONGCHAEUS MEXICANUS Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 23, pl. 1, fig. 12.
San Diego, California, to Scammon Lagoon, Lower California.

LONGCHAEUS MAZATLANICUS Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 24, pl. 1, fig. 7.
San Diego, California, to Cape Tepoca, western Mexico.

Subgenus Pharcidella Dall, 1889.

PHARCIDELLA ACHATES Gould, 1852.
Boston Journ. Nat Hist., vol. 6, p. 385, pl. 14, fig. 13.
? Santa Barbara, California (Jewett). Mazatlan, Mexico.

Genus TURBONILLA Risso, 1826.

TURBONILLA GILLI Dall and Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, p. 493, pl. 14, fig. 5.
Catalina Island to San Diego, California.

TURBONILLA GILLI DELMONTENSIS Dall and Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, p. 494, pl. 14, fig. 7.
Monterey Bay, California.

Add Striotürbonilla kincaidi Bartsch, 1921.
Proc. Biol. Soc. Wash. vol. 34, p. 33.
Dogfish Bay, Puget Sound.

TURBONILLA DIEGENSIS Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 31, pl. 2, fig. 13.
San Pedro to San Diego, California.

TURBONILLA ACRA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 32, pl. 2, fig. 14.
Catalina Island, California.

Subgenus CHEMNITZIA Orbigny, 1839.

CHEMNITZIA HYPOLISPA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 34, pl. 2, fig. 5.
Catalina Island to San Diego, California.

CHEMNITZIA AEPYNOTA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 35, pl. 2, fig. 10.
San Pedro, California, to San Martin Island, Lower California.

CHEMNITZIA ENGBERGI Bartsch, 1920.
Journ. Wash. Acad. Sci., vol. 10, 1920, p. 570.
San Juan Islands, Gulf of Georgia.

CHEMNITZIA GABBIANA Cooper, 1870.
Amer. Journ. Conch., vol. 6, p. 66.
Monterey, California.

CHEMNITZIA SANTAROSANA Dall and Bartsch, 1909.
U. S. Nat. Mus. Bull. 68, p. 36, pl. 2, fig. 7.
Santa Rosa Island to San Diego, California.

CHEMNITZIA CLARINDA Bartsch, 1912.
Proc. U. S. Nat. Mus., vol. 42, p. 264, pl. 35, fig. 4.
San Diego, California.

CHEMNITZIA MURICATOIDES Dall and Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, p. 495, pl. 14, fig. 2.
Monterey, California.

CHEMNITZIA KELSEYI Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 39, pl. 2, fig. 16.
Santa Barbara, California, to San Ignacio, Lower California.

CHEMNITZIA RAYMONDI Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 39, pl. 2, fig. 17.
Santa Rosa Island to San Diego, California.

Subgenus STRIOTURBONILLA Sacco, 1892.

STRIOTURBONILLA DINORA Bartsch, 1912.
Proc. U. S. Nat. Mus., vol. 42, p. 264, pl. 35, fig. 8.
San Diego, California.

STRIOTURBONILLA BUTTONI Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 43, pl. 3, fig. 4.
Santa Rosa Island, California, to Point Abreojos, Lower California.

STRIOTURBONILLA VANCOUVERENSIS Baird, 1863.
Proc. Zool. Soc., p. 67; Proc. U. S. Nat. Mus., vol. 30, p. 495, pl. 44, fig. 1, 1907.
Port Etches, Alaska, to Puget Sound.

STRIOTURBONILLA CANADENSIS Bartsch, 1917.
Proc. U. S. Nat. Mus., vol. 52, No. 2193, p. 640, pl. 44, fig. 11.
Forrester Island, Alaska.

STRIOTURBONILLA ASSER Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 45, pl. 3, fig. 1.
Redondo Beach to San Diego, California.

STRIOTURBONILLA ATTRITA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 46, pl. 4, fig. 11.
San Pedro to San Diego, California.

STRIOTURBONILLA ENCELLA Bartsch, 1912.
Proc. U. S. Nat. Mus., vol. 42, p. 265, pl. 35, fig. 1.
San Pedro, California.

STRIOTURBONILLA BAKERI Bartsch, 1912.
Proc. U. S. Nat. Mus., vol. 42, p. 265, pl. 35, fig. 10.
San Diego Bay, California.

STRIOTURBONILLA TORQUATA Gould, 1852.
Boston Journ. Nat. Hist., vol. 6, p. 384, pl. 14, fig. 16.
Point Fermin to San Diego, California.

STRIOTURBONILLA STYLINA Carpenter, 1865.
Ann. Mag. Nat. Hist., ser. 3, vol. 15, p. 396; U. S. Nat. Mus., Bull. 68, pl. 3, fig. 7.
Monterey to the Coronado Islands.

STRIOTURBONILLA CARPENTERI Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 49, pl. 3, fig. 9.
San Pedro, California.

STRIOTURBONILLA SIMPSONI Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 49, pl. 3, fig. 6.
Off Redondo to San Diego, California.

STRIOTURBONILLA PROFUNDICOLA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 50, pl. 3, fig. 11.
Off Catalina Island to San Diego, California, 197 fathoms.

STRIOTURBONILLA GALIANOI Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 51, pl. 4, fig. 12.
San Diego, California, to Cape San Lucas.

STRIOTURBONILLA HUMEROSA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 52, pl. 3, fig. 10.
Catalina Island to San Diego, California.

STRIOTURBONILLA SERRAE Dall and Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, p. 497, pl. 44, fig. 8; Bull. 68, p. 53, pl. 4, fig. 3.
Monterey, California.

STRIOTURBONILLA BARKLEYENSIS Bartsch, 1917.
Proc. U. S. Nat. Mus., vol. 52, No. 2193, p. 641, pl. 42, fig. 8; pl. 44, fig. 9.
Barkley Sound, Vancouver Island, British Columbia.

STRIOTURBONILLA DRACONA Bartsch, 1912.
Proc. U. S. Nat. Mus., vol. 42, p. 66, pl. 35, fig. 2.
San Diego, California.

STRIOTURBONILLA ARESTA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 54, pl. 4, fig. 5.
Santa Rosa Island to San Diego, California.

Subgenus PYRGOLAMPROS Sacco, 1892.

PYRGOLAMPROS VICTORIANA Dall and Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 3, p. 501, pl. 44, fig. 6; U. S. Nat. Mus., Bull. 68, p. 61, pl. 5, fig. 3.
Vancouver Island, British Columbia.

PYRGOLAMPROS RIDGWAYI Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull 68, p. 62, pl. 6, fig. 10.
San Diego, California.

PYRGOLAMPROS VALDEZI Dall and Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, p. 502, pl. 44, fig. 3; U. S. Nat Mus., Bull. 68, p. 62, pl. 6, fig. 8.
Barkley Sound, Vancouver Island, to Monterey, California.

PYRGOLAMPROS NEWCOMBEI Dall and Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, p. 503, pl. 45, fig. 6.
Port Simpson to Victoria, British Columbia.

PYRGOLAMPROS TAYLORI Dall and Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, p. 499, pl. 44, fig. 9.
Port Simpson to Vancouver Island, British Columbia.

PYRGOLAMPROS TALMA Dall and Bartsch, 1910.
Canada Geol. Surv. Mem., vol. 14 N., p. 13, pl. 2, fig. 3.
Barkley Sound, Vancouver, Island.

PYRGOLAMPROS LOWEI Dall and Bartsch, 1903.
Mem. Cal. Acad. Sci., vol. 3, p. 278, pl. 1, figs. 5, *5a*.
San Pedro to San Diego, California.

PYRGOLAMPROS HALIBRECTA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 65, pl. 5, fig. 10.
Catalina Island, California.

PYRGOLAMPROS GOULDI Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 66, pl. 6, fig. 1.
Santa Rosa Island to San Diego, California.

PYRGOLAMPROS AURANTIA Carpenter, 1865.
Journ. de Conchyl., ser. 3, vol. 5, p. 147; U. S. Nat. Mus., Bull. 68, pl. 6, fig. 4.
Departure Bay, Victoria, British Columbia, and Puget Sound.

PYRGOLAMPROS PEDROANA Dall and Bartsch, 1903.
Mem. Cal. Acad. Sci., vol. 3, 279, pl. 2, fig. 3.
Victoria, British Columbia, to San Diego, California.

PYRGOLAMPROS HALIA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 68, pl. 5, fig. 11.
Santa Barbara to San Diego, California.

PYRGOLAMPROS LYALLI Dall and Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, p. 500, pl. 44, fig. 4.
Banks Island, British Columbia.

PYRGOLAMPROS BERRYI Dall and Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, p. 500, pl. 44, fig. 10.
Monterey Bay to Catalina Island, California.

PYRGOLAMPROS PUGETENSIS Bartsch, 1917.
Proc. U. S. Nat. Mus., vol. 52, No. 2193, p. 647, pl. 44, fig. 4.
Puget Sound.

PYRGOLAMPROS TREMPERI Bartsch, 1917.
Proc. U. S. Nat. Mus., vol. 52, No. 2193, p. 647, pl. 44, fig. 7.
Off San Diego Bay, 15 fathoms.

PYRGOLAMPROS ALASKANA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 70, pl. 6, fig. 9.
Kodiak to Sitka Harbor, Alaska.

PYRGOLAMPROS CHOCOLATA Carpenter, 1866.
Proc. Cal. Acad. Sci., vol. 3, p. 220; U. S. Nat. Mus., Bull. 68, p. 70, pl. 5, fig. 9.
San Pedro, California.

PYRGOLAMPROS PAINEI Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 71, pl. 5. fig. 4.
Redondo Beach to San Diego, California.

PYRGOLAMPROS KEEPI Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 71, pl. 5, fig. 1.
Long Beach to San Diego, California.

PYRGOLAMPROS HALISTREPTA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 72, pl. 5, fig. 2.
Off Newport, California.

PYRGOLAMPROS LITUYANA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 72, pl. 5, fig. 8.
Lituya Bay, Alaska.

PYRGOLAMPROS OREGONENSIS Dall and Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, p. 503, pl. 45, fig. 2.
Off the coast of Washington and Oregon in 30 fathoms.

PYRGOLAMPROS GLORIOSA Bartsch, 1912.
Proc. U. S. Nat. Mus., vol. 42, p. 268, pl. 35, fig. 9.
Off San Diego, California, in 12 fathoms.

PYRGOLAMPROS MACOUNI Dall and Bartsch, 1910.
Canada Geol. Surv. Mem., vol. 14, p. 15, pl. 1, fig. 9.
Barkley Sound, Vancouver Island.

PYRGOLAMPROS PESA Dall and Bartsch, 1910.
Canada Geol. Surv. Mem., vol. 14, p. 14, pl. 2, fig. 5.
Barkley Sound, Vancouver Island.

PYRGOLAMPROS RINELLA Dall and Bartsch, 1910.
Canada Geol. Surv. Mem., vol. 14, p. 14, pl. 1, fig. 2.
Barkley Sound, Vancouver Island.

PYRGOLAMPROS FRANCISCANA Bartsch, 1917.
Proc. U. S. Nat. Mus., vol. 52, No. 2193, p. 645, pl. 42, fig. 2.
San Francisco Bay, California.

Subgenus PYRGISCUS Philippi, 1841.

PYRGISCUS VEXATIVUS Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 77, pl. 7, fig. 11.
San Pedro to San Diego, California.

PYRGISCUS OBESUS Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 78, pl. 7, fig. 3.
Pacific Beach, San Diego County, California.

PYRGISCUS NUTTINGI Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 79, pl. 7, fig. 13.
Off San Pedro and San Diego, California, 15 to 20 fathoms.

PYRGISCUS CALLIA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 80, pl. 7, fig. 4.
San Diego, California.

PYRGISCUS PLUTO Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 81, pl. 9, fig. 9.
San Pedro, California.

PYRGISCUS JEWETTI Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 82, pl. 7, fig. 2.
San Pedro, California, to San Hipolito Point, Lower California.

PYRGISCUS DORA Bartsch, 1917.
Proc. U. S. Nat. Mus., vol. 52, p. 649, pl. 42, fig. 10.
San Diego, California.

PYRGISCUS INA Bartsch, 1917.
Proc. U. S. Nat. Mus., vol. 52, p. 649, pl. 44, fig. 10.
San Diego, California.

PYRGISCUS ISTA Bartsch, 1917.
Proc. U. S. Nat. Mus., vol. 52, p. 650, pl. 42, fig. 6.
San Diego, California.

PYRGISCUS EVA Bartsch, 1917.
Proc. U. S. Nat. Mus., vol. 52, p. 651, pl. 44, fig. 6.
San Diego, California.

PYRGISCUS SIGNAE Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 83, pl. 7, fig. 1.
San Pedro, California.

PYRGISCUS MÖRCHI Dall and Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, p. 505, pl. 45, fig. 1.
Redondo Beach to San Diego, California.

PYRGISCUS ARAGONI Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 85, pl. 9, fig. 12.
Monterey Bay, in 20 fathoms.

PYRGISCUS RECTUS Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 85, pl. 7, fig. 12.
San Diego, California, to Point Abreojos, Lower California.

PYRGISCUS WELDI Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 86, pl. 8, fig. 11.
Off Point Fermin, California.

PYRGISCUS NEREIA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 86, pl. 8, fig. 1.
San Pedro to San Diego, California.

PYRGISCUS ANTESTRIATUS Dall and Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, p. 506, pl. 45, fig. 5.
Esteros Bay to San Diego, California.

PYRGISCUS ANTEMUNDUS Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 88, pl. 8, fig. 15.
Santa Rosa and Santa Catalina Islands, California.

PYRGISCUS TENUICULUS Gould, 1853.
Boston Journ. Nat. Hist., vol. 6, p. 383, pl. 14, fig. 15.
Monterey, California, to Point Abreojos, Lower California.

PYRGISCUS VIRGO Carpenter, 1865.
Ann. Mag. Nat. Hist., ser. 3, vol. 15, p. 396; U. S. Nat. Mus., Bull. 68, pl. 8, fig. 4.
Santa Barbara, California.

PYRGISCUS CALLIMENE Bartsch, 1912.
Proc. U. S. Nat. Mus., vol. 42, No. 1903, p. 271, pl. 36, fig. 7.
San Diego, California.

PYRGISCUS CANFIELDI Dall and Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, p. 504, pl. 47, fig. 4.
Monterey Bay, California.

PYRGISCUS ALMO Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 95, pl. 9, fig. 8.
San Diego, California.

PYRGISCUS GRIPPI Bartsch, 1912.
Proc. U. S. Nat. Mus., vol. 42, p. 270, pl. 36, fig. 9.
San Diego, California.

PYRGISCUS EUCOSMOBASIS Dall and Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, p. 507, pl. 45, fig. 8.
San Luis Obispo to San Diego, California.

PYRGISCUS AURICOMA Dall and Bartsch, 1903.
Mem. Cal. Acad. Sci., vol. 3, p. 274, pl. 1, fig. 4.
San Pedro, California, and Scammon Lagoon, Lower California.

PYRGISCUS CASTANEUS Keep, 1888.
West Coast Shells, p. 52, fig. 33; U. S. Nat. Mus., Bull. 68, pl. 9, fig. 1.
San Pedro to San Diego, California. S. Hippolito Pt. L. Cal. H. coll.

PYRGISCUS CASTANELLUS Dall, 1908.
Nautilus, vol. 22, p. 131; Proc. U. S. Nat. Mus., p. 102, pl. 9, fig. 7, 1909.
Monterey, California.

PYRGISCUS WICKHAMI Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 106, pl. 10, fig. 9.
Catalina Island, California.

PYRGISCUS ADUSTUS Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 108, pl. 10, fig. 12.
San Diego, California.

Subgenus Mormula A. Adams, 1854.

MORMULA LORDI E. A. Smith, 1880.
Ann. Mag. Nat. Hist., ser. 5, vol. 6, p. 288; U. S. Nat. Mus., Bull. 68, pl. 11, fig. 4.
Sitka, Alaska, to Puget Sound.

MORMULA REGINA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 112, pl. 11, fig. 1.
Santa Rosa Island to Catalina Island, California.

MORMULA CATALINENSIS Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 113, pl. 11, fig. 10.
Catalina Island, California. San Diego, Baker.

MORMULA ESCHSCHOLTZI Dall and Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, p. 513, pl. 45, fig. 10.
Port Simpson to Vancouver Island, British Columbia.

MORMULA TRIDENTATA Carpenter, 1865.
Journ. de Conchyl., vol. 13, p. 147; U. S. Mus., Bull. 68, pl. 11, fig. 12.
Monterey to San Diego, California.

MORMULA AMBUSTA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 115, pl. 11, fig. 13.
San Pedro to San Diego, California.

MORMULA SANTOSANA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 117, pl. 11, fig. 7.
San Diego ? Todos Santos Bay, Lower California.

MORMULA PENTALOPHA Dall and Bartsch, 1903.
Mem. Cal. Acad. Sci., vol. 3, p. 282, pl. 1, fig. 1.
San Pedro to Todos Santos Bay, Lower California.

MORMULA HETEROLOPHA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 118, pl. 11, fig. 9.
San Diego, California, to San Hipolito Point, Lower California.

MORMULA PERISCELIDA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 119, pl. 11, fig. 6.
Santa Rosa Island, California.

Subgenus Bartschella Iredale, 1917.

BARTSCHELLA LAMINATA Carpenter, 1856.
Ann. Mag. Nat. Hist., ser. 3, vol. 15, p. 396; U. S. Nat. Mus., Bull. 68, pl. 12, fig. 16.
San Pedro, California, to Point Abreojos, Lower California.

BARTSCHELLA ARATA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 125, pl. 12, fig. 12.
Off Catalina Island, California.

Subgenus DUNKERIA Carpenter, 1856.

DUNKERIA SWANI Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 129, pl. 12, fig. 9.
San Pedro, California.

Genus ODOSTOMIA Fleming, 1817.

Subgenus SALASSIELLA Dall and Bartsch, 1909.

SALASSIELLA LAXA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 133, pl. 13, fig. 8.
San Diego, California, to Scammon Lagoon, Lower California.

SALASSIELLA RICHI Dall and Bartsch, 1909.
U. S. Nat, Mus., Bull. 68, p. 133, pl. 13, fig. 6.
San Pedro, California.

Subgenus BESLA Dall and Bartsch, 1904.

BESLA CALLIMORPHA Dall and Bartsch, 1909.
Proc. Cal. Acad. Sci., vol. 3, p. 219; U. S. Nat. Mus., Bull. 68, p. 136, pl. 13, fig. 5.
San Pedro, California. Todos Santos B. L. Cal.

Subgenus CHRYSALLIDA Carpenter, 1856.

CHRYSALLIDA HETEROCINCTA Bartsch, 1912.
Proc. U. S. Nat. Mus., vol. 42, p. 274, pl. 36, fig. 4.
San Diego, California.

CHRYSALLIDA RITTERI Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 146, pl. 14, fig. 8.
Catalina Island to San Diego, California.

CHRYSALLIDA EUGENA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 147, pl. 14, fig. 1.
San Pedro, California, to San Hipolito Point, Lower California.

CHRYSALLIDA TRACHIS Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 148, pl. 15, fig 4.
Monterey to San Diego, California.

CHRYSALLIDA LUCCA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 148, pl. 15, fig. 8.
Monterey to San Diego, California.

CHRYSALLIDA CLEMENTINA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 149, pl. 15, fig. 5.
San Clemente Island, California.

CHRYSALLIDA OLDROYDI Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 150, pl. 15, fig. 1.
San Pedro to the Coronado Islands.

CHRYSALLIDA CINCTA Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 659; U. S. Nat. Mus., Bull. 68, pl. 15, fig. 2.
Santa Barbara to Pacific beach, California.

Chrysallida cumshewaënsis Bartsch. 1921.
Proc. Biol. Soc. Wash. vol. 34, p. 34.
Cumshewa Inlet, B. C.
Chrysallida strongi Bartsch

Catalina Island, Cal.

CHRYSALLIDA VICOLA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 153, pl. 16, fig. 11.
San Pedro, California.

CHRYSALLIDA ASTRICTA Dall and Bartsch, 1907.
Pros. U. S. Nat. Mus., vol. 33, p. 515, pl. 46, fig. 2.
Monterey, California. S. Hippolite Pt. L. Cal. H. coll.

CHRYSALLIDA COOPERI Dall and Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, p. 514, pl. 46, fig. 7.
Monterey, California.

CHRYSALLIDA MONTEREYENSIS Dall and Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, p. 516, pl. 46, fig. 4.
Monterey to San Luis Obispo, California.

CHRYSALLIDA EUGLYPTA E. Jordan, 1920.
Proc. U. S. Nat. Mus., vol. 58, p. 2, pl. 1, fig. 1.
Trinidad, California.

CHRYSALLIDA PULCIA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 160, pl. 16, fig. 10.
San Pedro, California.

CHRYSALLIDA VIRGINALIS Dall and Bartsch, 1909.
U. S. Nat. Mus. Bull., 68, p. 160, pl. 18, fig. 7.
San Pedro, California, to Point Abreojos, Lower California.

CHRYSALLIDA OREGONENSIS Dall and Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, p. 516, pl. 46, fig. 10.
Queen Charlotte Islands, British Columbia, to Monterey, California.

CHRYSALLIDA PROMECES Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 164, pl. 18, fig. 2.
San Diego (?) Todos Santos Bay, Lower California.

CHRYSALLIDA PULCHERRIMA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 164, pl. 17, fig 7.
San Pedro, California.

CHRYSALLIDA VINCTA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 165, pl. 17, fig. 4.
San Pedro, California.

CHRYSALLIDA HELGA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 166, pl. 17, fig. 8.
San Pedro, California, to Coronado Islands.

CHRYSALLIDA DICELLA Bartsch, 1912.
Proc. U. S. Nat. Mus., vol. 42, p. 274, pl. 36, fig. 4.
San Diego, California.

CHRYSALLIDA THALIA Bartsch, 1912.
Proc. U. S. Nat. Mus., vol. 42, p. 275, pl. 36, fig. 3.
Coronado Islands.

CHRYSALLIDA SANCTORUM Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 167, pl. 18, fig. 1.
Todos Santos Bay to San Hipolito Point, Lower California.

CHRYSALLIDA SAPIA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 167, pl. 18, fig. 3.
San Diego, California.

Subgenus IVIDELLA Dall and Bartsch, 1909.

IVIDELLA PEDROANA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 172, pl. 19, fig. 8.
San Pedro, California, to Scammon Lagoon, Lower California.

IVIDELLA NAVISA Dall and Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, p. 517, pl. 46, fig. 2.
San Pedro, California, to Scammon Lagoon, Lower California.

IVIDELLA NAVISA DELMONTENSIS Dall and Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, p. 518, pl. 46, fig. 10.
Off Del Monte, Monterey Bay, California.

Subgenus MIRALDA A. Adams, 1864.

MIRALDA HEMPHILLI Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 176, pl. 19, fig. 10.
San Pedro, California, to Point Abreojos, Lower California.

MIRALDA AEPYNOTA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 179, pl. 19, fig. 7.
San Pedro, California, to Cape San Lucas.

Subgenus IVARA Dall and Bartsch, 1903.

IVARA TERRICULA Dall and Bartsch, 1903.
Mem. Cal. Acad. Sci., vol. 3, p. 285, pl. 4, fig. 14.
Monterey, California, to Point Abreojos, Lower California.

Subgenus EVALINA Dall and Bartsch, 1904.

EVALINA AMERICANA Dall and Bartsch, 1904.
Proc. Biol. Soc. Wash., vol. 17, p. 16; U. S. Nat. Mus., Bull. 68, pl. 20, fig. 7.
San Pedro, California, to Coronado Islands.

Subgenus IOLAEA A. Adams 1867.

IOLAEA AMIANTA Dall and Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, p. 519, pl. 46, fig. 9.
Monterey Bay, California, to Point Abreojos, Lower California.

IOLAEA EUCOSMIA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 183, pl. 20, fig. 10.
San Pedro, California, to Point Abreojos, Lower California.

Subgenus MENESTHO Moller, 1842.

MENESTHO PHARCIDA Dall and Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, p. 520, pl. 46, fig. 8.
Queen Charlotte Islands, British Columbia.

MENESTHO EXARA Dall and Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, p. 521, pl. 46, fig. 6.
Monterey Bay, California.

MENESTHO GLORIOSA Bartsch, 1912.
Proc. U. S. Nat. Mus., vol. 42, p. 276, pl. 36, fig. 2.
San Diego, California, to San Hipolito Point, Lower California.

MENESTHO EXCISA Bartsch, 1912.
Proc. U. S. Nat. Mus., vol. 42, p. 276, pl. 36, fig. 8.
Catalina Island, California.

MENESTHO AMILDA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 187, pl. 21, fig. 4.
San Diego, California, to Round Island, Lower California.

MENESTHO FARMA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 188, pl. 20, fig. 1.
Catalina Island, California.

MENESTHO ENORA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 189, pl. 21, fig. 2.
San Pedro, California.

MENESTHO FETELLA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 189, pl. 21, fig. 9.
San Pedro, California, to San Ignacio Lagoon, Lower California.

MENESTHO HYPOCURTA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 190, pl. 21, fig. 8.
Bristol Bay, Bering Sea, in 33 fathoms.

MENESTHO HARFORDENSIS Dall and Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, p. 521, pl. 46, fig. 5.
Port Harford, California.

Subgenus EVALEA A. Adams, 1860.

EVALEA NUNIVAKENSIS Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 194, pl. 22, fig. 6.
North end of Nunivak Island, Bering Sea.

EVALEA KILLISNOOËNSIS Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 195, pl. 22, fig. 7.
Killisnoo, southeastern Alaska.

EVALEA TILLAMOOKENSIS Dall and Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, p. 522, pl. 47, fig. 1.
Off Tillamook, Oregon, in 786 fathoms.

EVALEA ESILDA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 196, pl. 22, fig. 1.
Off San Diego, California, in 359 fathoms.

EVALEA ALEUTICA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 196, pl. 22, fig. 5.
Captains Bay, Unalaska Island, Alaska.

EVALEA KADIAKENSIS Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 197, pl. 22, fig. 9.
Kodiak Island, Alaska.

EVALEA YOUNGI Dall and Bartsch, 1910.
Canada Geol. Surv. Mem., vol. 14, N., No. 1143, p. 16, pl. 2, fig. 1.
Barkley Sound, Vancouver Island, British Columbia.

EVALEA THEA Bartsch, 1912.
Proc. U. S. Nat. Mus., vol. 42, p. 278, pl. 37, fig. 7; pl. 38, fig. 13.
San Pedro, California.

EVALEA CALLIOPE Bartsch, 1912.
Proc. U. S. Nat. Mus., vol. 42, p. 278, pl. 36, fig. 10.
Off La Jolla, San Diego County, California, in 199 fathoms.

EVALEA CALCARELLA Bartsch, 1912.
Proc. U. S. Nat. Mus., vol. 42, p. 279, pl. 37, fig. 4.
Off Santa Rosa Island, California, in 48 fathoms.

EVALEA SPREADBOROUGHI Dall and Bartsch, 1910.
Canada Geol. Surv. Mem., vol. 14, N., No. 1143, p. 17, pl. 2, fig. 2.
Barkley Sound, Vancouver Island, British Columbia.

EVALEA VANCOUVERENSIS Dall and Bartsch, 1910.
Canada Geol. Surv. Mem., vol. 14, N., No. 1143, p. 18, pl. 2, fig. 7.
Barkley Sound, Vancouver Island, British Columbia.

EVALEA QUADRAE Dall and Bartsch, 1910.
Canada Geol. Surv. Mem., vol. 14, N., No. 1143, p. 17, pl. 2, fig. 6.
Barkley Sound, Vancouver Island, British Columbia.

EVALEA CALLIMENE Bartsch, 1912.
Proc. U. S. Nat. Mus., vol. 42, p. 281, pl. 38, fig. 2.
San Pedro, California.

EVALEA CYPRIA Dall and Bartsch, 1910.
Proc U. S. Nat. Mus., vol. 42, p. 282, pl. 37, fig. 9.
Skidegate, Queen Charlotte Islands, British Columbia.

EVALEA EDMONDI E. Jordan, 1920.
Proc. U. S. Nat. Mus., vol. 58, p. 3, pl. 1, fig. 2.
Trinidad, California.

EVALEA HYPATIA Dall and Bartsch, 1912.
Proc. U. S. Nat. Mus., vol. 42, p. 282, pl. 37, fig. 5.
Skidegate, Queen Charlotte Islands, British Columbia.

EVALEA BARKLEYENSIS Dall and Bartsch, 1910.
Canada Geol. Surv. Mem., vol. 14, N., No. 1143, p. 19, pl. 2, fig. 8.
Barkley Sound, Vancouver Island, British Columbia.

EVALEA COOKEANA Bartsch, 1912.
Nautilus, vol. 23, p. 138, pl. 11, fig. 7.
Ellamar, Alaska.

EVALEA BALDRIDGAE Bartsch, 1912.
Proc. U. S. Nat. Mus., vol. 42, p. 284, pl. 38, fig. 1.
San Pedro, California.

EVALEA SKIDEGATENSIS Bartsch, 1912.
Proc. U. S. Nat. Mus., vol. 42, p. 284, pl. 38, fig. 7.
Skidegate, Queen Charlotte Islands, British Columbia, to Trinidad, California.

EVALEA CASSANDRA Bartsch, 1912.
Proc. U. S. Nat. Mus., vol. 42, p. 285, pl. 38, fig. 5.
Skidegate, Queen Charlotte Islands, British Columbia.

EVALEA WILLETTI Bartsch, 1917.
Proc. U. S. Nat. Mus., vol. 52, No. 666, pl. 43, fig. 6.
Prince of Wales Island, Alaska.

EVALEA HERILDA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 197, pl. 23, fig. 8.
San Diego, California.

EVALEA VALDEZI Dall and Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, p. 526, pl. 48, fig. 2.
Monterey, California. Barkley Sd. Vancouver Id. S. Diego, Kelsey

EVALEA NEMO Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 198, pl. 22, fig. 8.
San Pedro to San Diego, California.

EVALEA IO Dall and Bartsch, 1903.
Mem. Cal. Acad. Sci., vol. 3, p. 281, pl. 1, fig. 14; U. S. Nat. Mus., Bull. 68 p. 199, pl. 22, fig. 4.
Santa Rosa Island to San Pedro and Catalina Island, California.

EVALEA PRATOMA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 199, pl. 23, fig. 4.
Santa Rosa Island, in 50 fathoms.

EVALEA SEPTENTRIONALIS Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 200, pl. 26, fig. 9.
Unalaska Island, Alaska.

EVALEA CAPITANA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 200, pl. 26, fig. 7.
Captains Harbor, Unalaska to Kodiak, Alaska.

EVALEA JEWETTI Dall and Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, p. 523, pl. 47, fig. 3.
Santa Barbara, California.

EVALEA INFLATA Dall and Bartsch, 1907. Cpr. Ann. Mag. 3. vol. 15, p. 395, 1865.
Proc. U. S. Nat. Mus., vol. 33, p. 524, pl. 47, fig. 8.
Neah Bay, Washington. S. Hippolito Pt. L. Cal. H. coll.

EVALEA COLUMBIANA Dall and Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, p. 525, pl. 47, fig. 9.
Port Rupert, British Columbia, to Puget Sound.

EVALEA UNALASHKENSIS Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 203, pl. 26, fig. 5.
Captains Harbor, Unalaska Island, Alaska.

EVALEA ATOSSA Dall, 1908.
Proc. U. S. Nat. Mus., vol. 34, p. 253; vol. 52, p. 203, pl. 26, fig. 8, 1909.
San Pedro, California.

EVALEA OBESA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 203, pl. 26, fig. 4.
San Pedro, California.

EVALEA FRANCISCANA Bartsch, 1917.
Proc. U. S. Nat. Mus., vol. 52, p. 665, pl. 45, fig. 7.
San Francisco Bay, California.

EVALEA PHANEA Dall and Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, p. 528, pl. 48, fig. 7.
Monterey, California.

EVALEA PHANELLA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 205, pl. 23, fig. 9.
San Pedro to San Diego, California.

EVALEA SANTAROSANA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 205, pl. 26, fig. 6.
Santa Rosa Island, California.

EVALEA TENUISCULPTA Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 659; U. S. Nat. Mus., Bull. 68, pl. 23, fig. 2.
Barkley Sound, Vancouver Island, to Lower California.

EVALEA ANGULARIS Dall and Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, p. 523, pl. 47, fig. 2.
Sitka, Alaska, to Port Harford, California.

EVALEA DONILLA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 208, pl. 24, fig. 3.
San Pedro, California, to Todos Santos Bay, Lower California.

EVALEA CALIFORNICA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 208, pl. 24, fig. 2.
San Diego, California, to Coronado Islands. S. Martin Id. L. Cal. Baker,

EVALEA SERILLA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 209, pl. 24, fig. 9.
Off San Diego, California.

EVALEA TACOMAËNSIS, Dall and Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, p. 526, pl. 47, fig. 10.
Tacoma, Puget Sound, Washington.

EVALEA AMCHITKANA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 210, pl. 24, fig. 7.
Amchitka Island, Aleutians, to Peril Strait, Alaska.

EVALEA STEPHENSAE Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 210, pl. 24, fig. 5.
Bear Bay, Peril Straits, Alaska, to Barkley Sound, British Columbia.

EVALEA CLESSINI Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 211, pl. 24, fig. 4.
Baranoff and Admiralty Islands, Alaska.

EVALEA MINUTISSIMA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 211, pl. 25, fig. 4.
San Diego, California, to Point Abreojos, Lower California.

EVALEA RAYMONDI Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 212, pl. 25, fig. 9.
Catalina Island, California.

EVALEA GRAVIDA Gould, 1852.
Proc. Boston Soc. Nat. Hist., vol. 6, p. 376; U. S. Nat. Mus., Bull. 68, p. 212, pl. 25, fig. 7.
Santa Barbara, California.

EVALEA NOTILLA Dall and Bartsch, 1909.
U S. Nat. Mus., Bull. 68, p. 213, pl. 25, fig. 6.
Catalina Island, California.

EVALEA MOVILLA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 213, pl. 25, fig. 1.
Off San Diego, California, in 359 fathoms.

EVALEA ALTINA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 214, pl. 25, fig. 2.
Off San Diego, California, in 359 fathoms.

EVALEA PROFUNDICOLA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 214, pl. 25, fig. 8. 37
Point Vincent~~e~~ to San Diego, California, in deep water.

EVALEA BARANOFFENSIS Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 215, pl. 25, fig. 3.
Baranoff and Admiralty Islands, Alaska.

EVALEA SITKAËNSIS Clessin, 1900.
Conch. Cab. (Pyramidellidae), ed. 2, p. 121; U. S. Nat. Mus., Bull. 68, pl. 26, fig. 3.
Sitka, Alaska.

EVALEA HAGMEISTERI Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 216, pl. 26, fig. 1.
Hagmeister Island, Bering Sea.

EVALEA RESINA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 216, pl. 27, fig. 6.
Arch Beach, California.

EVALEA DELICIOSA Dall and Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, p. 525, pl. 47, fig. 5.
Barkley Sound, Vancouver Island, to Monterey, California.

Subgenus AMAURA Moller, 1842.

AMAURA LASTRA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 219, pl. 28, fig. 7.
Catalina Island to San Diego, California.

AMAURA KENNERLYI Dall and Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, p. 529, pl. 48, fig. 8.
Nanaimo, British Columbia, to Monterey Bay, California.

AMAURA ELSA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 220, pl. 29, fig. 1.
Kodiak Island, Alaska.

AMAURA BERINGI Dall, 1871.
Amer. Journ. Conch., vol. 7, p. 117; U. S. Nat. Mus., Bull. 68, pl. 27, fig. 8.
Norton Sound, Alaska.

AMAURA SUBGLOBOSA Bartsch, 1912.
Proc. U. S. Nat. Mus., vol. 42, p. 286, pl. 37, fig. 2.
San Diego, California.

AMAURA SATURA Carpenter, 1865.
Ann. Mag. Nat. Hist. ser. 3, vol. 15, p. 29; U. S. Nat. Mus., Bull. 68, pl. 27, fig. 1.
Neah Bay, Washington.

AMAURA ENGBERGI Bartsch, 1920.
Journ. Wash. Acad. Sci., vol. 10, 1920, p. 570.
San Juan Islands, Gulf of Georgia.

AMAURA SANJUANENSIS Bartsch, 1920.
Journ. Wash. Acad. Sci., vol. 10, 1920, p. 570.
San Juan Islands, Gulf of Georgia.

AMAURA HELENA Bartsch, 1912.
Proc. U. S. Nat. Mus., vol. 42, p. 286, pl. 38, fig. 10.
San Pedro, California.

AMAURA GRIPPIANA Bartsch, 1912.
Proc. U. S. Nat. Mus., vol. 42, p. 287, pl. 38, fig. 11.
Nanaimo, British Columbia.

AMAURA FARALLONENSIS Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 221, pl. 27, fig. 7.
Off the Farallones Islands, California.

AMAURA SILLANA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 222, pl. 28, fig. 9.
Captains Bay, Unalaska, Alaska.

AMAURA TALPA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 222, pl. 27, fig. 9.
Mole Harbor and Sitka Harbor, Alaska. Maple Bay, Vanc. Id.

AMAURA KRAUSEI Clessin, 1900.
Conch. Cab. (Pyramidellidae), ed. 2, p. 115, pl. 28, fig. 1.
Kodiak to Killisnoo, Alaska.

AMAURA ELDORANA Bartsch, 1912.
Proc. U. S. Nat. Mus., vol. 42, p. 287, pl. 38, fig. 12.
Kodiak, Alaska.

AMAURA ORCIA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 223, pl. 27, fig. 3.
Santa Rosa Island, California.

AMAURA GOULDII Carpenter, 1905. Suppl. Rep. B. As. 1864, p. 658.
Ann. Mag. Nat. Hist., ser. 3, vol. 15, p. 29; U. S. Nat. Mus., Bull. 68, pl. 27, fig. 2.
Neah Bay, Washington.

AMAURA ARCTICA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 224, pl. 28, fig. 5.
Seahorse Islands, Arctic Ocean, south to Bristol Bay, Bering Sea.

AMAURA AVELLANA Carpenter, 1865.
Ann. Mag. Nat. Hist., ser. 3, vol. 15, p. 30; U. S. Nat. Mus., Bull. 68, pl. 28, fig. 3.
Neah Bay, Washington.

AMAURA MORATORA Dall and Bartsch, 1909.
U S. Nat. Mus., Bull. 68, p. 225, pl. 30, fig. 7.
Off Point Reyes, California.

AMAURA PESA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 226, pl. 29, fig. 2.
Kodiak Island, Alaska.

AMAURA NOTA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 226, pl. 28, fig. 6.
Santa Rosa Island, to San Diego, California.

AMAURA ILIULIUKENSIS Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 227, pl. 29, fig. 4.
Unalaska Island, Alaska.

AMAURA NUCIFORMIS Carpenter, 186~~5~~. 4/
Ann. Mag. Nat. Hist., ser. 3, vol. 15, p. 30; U. S. Nat. Mus., Bull. 68, pl. 28, fig. 1.
Neah Bay, Washington.

AMAURA WASHINGTONIA Bartsch, 1920.
Journ. Wash. Acad. Sci., vol. 10, 1920, p. 571,
San Juan Islands, Gulf of Georgia.

AMAURA CANFIELDI Dall, 1908.
Nautilus, vol. 31, p. 131; U. S. Nat. Mus., Bull. 68, pl. 28, fig. 2, 1909.
Barkley Sound, British Columbia, to San Diego, California.

AMAURA SUBTURRITA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 228, pl. 28, fig. 4.
Santa Barbara, California, to Todos Santos Bay, Lower California.

AMAURA MARTENSI Dall and Bartsch, 1906.
Proc. U. S. Nat. Mus., vol. 30, p. 361, pl. 15, fig. 5.
Killisnoo, Alaska.

Subgenus HEIDA Dall and Bartsch, 1904.

HEIDA KELSEYI Bartsch, 1912.
Proc. U. S. Nat. Mus., vol. 42, p. 288, pl. 38, fig. 6.
San Diego, California.

Subgenus ODOSTOMIA s. s.

ODOSTOMIA FARELLA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 232, pl. 30, fig. 4.
Off Long Beach, California.

ODOSTOMIA DINELLA Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull. 68, p. 232, pl. 30, fig. 1.
Off Redondo, California.

ODOSTOMIA CORONADOËNSIS Dall and Bartsch, 1909.
U. S. Nat. Mus., Bull 68, p. 233, pl. 30, fig. 3.
Off Coronado Beach, San Diego, California.

ODOSTOMIA ORCUTTI Bartsch, 1917.
Proc. U. S. Nat. Mus., vol. 52, p. 667, pl. 46, fig. 8.
San Diego, California.

Suborder NUCLEOBRANCHIATA.

Family PTEROTRACHEIDAE.

Genus CARDIAPODA Orbigny, 1836.

CARDIAPODA PLACENTA Lesson, 1830.
Voy. de la *Coquille*, Moll., p. 253, No. 3, pl. 3, fig. 2.
North Pacific. Pelagic.

Family CARINARIIDAE.

Genus CARINARIA Lamarck, 1801.

CARINARIA PUNCTATA Orbigny, 1836.
Voy. Amer. Mer., vol. 5, p. 160, pl. 11, figs. 6–15.
North and South Pacific. Pelagic.

CARINARIA LATIDENS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 342.
North Pacific in north latitude 43° 10′ and west longitude 147°. Pelagic.

Family ATLANTIDAE.

Genus ATLANTA Lesueur, 1817.

ATLANTA PERONII Lesueur, 1817.
Journ. de Phys., vol. 85, p. 390, pl. 2, figs. 1, 2.
North Pacific in north latitude 33° and west longitude 133°. Pelagic.

ATLANTA INVOLUTA Gray, 1850.
Gray, Figs. Moll. Anim., vol. 4, p. 101; Voy. *Bonite*, Atlas, pl. 21, figs. 9–14 (1841[1]).
Pacific Ocean. Pelagic.

ATLANTA INCLINATA Gray, 1850.
Gray, Figs. Moll. Anim., vol. 4, p. 101; Voy. *Bonite*, Atlas, pl. 19, figs. 8–21.
Pacific Ocean. Pelagic.

ATLANTA HELICINOIDEA Gray, 1850.
Gray, Figs. Moll. Anim., vol. 4, p. 101; Voy. *Bonite*, Atlas, pl. 20, figs. 23–30.
Pacific Ocean. Pelagic.

ATLANTA BRUNNEA Gray, 1850.
Figs. Moll. Anim., vol. 4, p. 101, pl. 242, fig. 5; Voy. *Bonite*, Atlas, pl. 21, figs. 15–29.
Pacific Ocean. Pelagic.

ATLANTA GAUDICHAUDII Gray, 1850.
Figs. Moll. Anim., vol. 4, p. 101, pl. 241, fig. 4; Voy. *Bonite*, Atlas, pl. 20, figs. 29–34.
Pacific Ocean. Pelagic.

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[1] The names in the Atlas of the Voyage of the *Bonite* were in the vernacular only, and were first latinized by Gray, before the appearance of the text of the *Bonite*.

ATLANTA DEPRESSA Gray, 1850.
Figs. Moll. Anim., vol. 4, p. 101; Voy. *Bonite*, Atlas, pl. 20, figs. 31–37.
Pacific Ocean. Pelagic.

ATLANTA QUOYII Gray, 1850.
Figs. Moll. Anim., vol. 4, p. 101, pl. 242, fig. 1; Voy. *Bonite*, Atlas, pl. 20, figs. 16–22.
Pacific Ocean in north latitude 33°, west longitude 135° 10′. Pelagic.

ATLANTA CUNICULA Gould, 1852.
Rep. U. S. Expl. Exp., Moll., p. 492, pl. 51, fig. 598.
North Pacific Ocean. Pelagic.

Genus OXYGYRUS Benson, 1835.

OXYGYRUS RANGI Lovèn, 1847.
K. Vetensk. Akad. Forh., p. 491, pl. 4; Voy. *Bonite*, Atlas, pl. 18, figs. 18–24.
Pacific Ocean. Off Monterey, California. Pelagic.

Suborder PECTINIBRANCHIATA.

Superfamily DACTYLOGLOSSA.

Family OVULIDAE.

Genus SIMNIA (Leach) Risso, 1826.

SIMNIA VIDLERI Sowerby, 1881.
Proc. Zool. Soc., p. 638, pl. 56, fig. 1.
Monterey to San Diego, California.

SIMNIA ACICULARIS Lamarck, 1811.
Ann. du Mus. Paris, vol. 16, p. 112.—Tryon, Man., vol. 7, pl. 5, figs. 23-25.
San Pedro to San Diego, California, and Acapulco, Mexico.

SIMNIA VARIABILIS C. B. Adams, 1850.
Panama Shells, p. 255.—Tryon, Man., vol. 7, pl. 5, fig. 44.
Monterey, California, to Panama.

Subgenus Neosimnia Fischer, 1884.

NEOSIMNIA BARBARENSIS Dall, 1892.
Proc. U. S. Nat. Mus., vol. 15, p. 206, pl. 21, fig. 1.
Newport, California, to Gulf of California. Monterey, Berry.

NEOSIMNIA CATALINENSIS Berry, 1916.
Nautilus, vol. 30, No. 2, p. 21, pl. 5, fig. 3.
Monterey to Gulf of California.

NEOSIMNIA UNIPLICATA Sowerby, 1848.
Proc. Zool. Soc., p. 135.—Tryon, Man., vol. 7, pl. 5, fig. 39.
San Pedro, California, to Magdalena Bay, Lower California.

Family PEDICULARIIDAE.

Genus PEDICULARIA Swainson, 1840.

PEDICULARIA CALIFORNICA Newcomb, 1864.
Proc. Cal. Acad. Sci., vol. 3, p. 121; vol. 4, p. 322, pl. 1, fig. 9.
Farallones Islands to Monterey, California.

Superfamily TAENIOGLOSSA.

Family CYPRAEIDAE.

Genus CYPRAEA Linnaeus, 1758.

CYPRAEA SPADICEA Swainson, 1823.
Philos. Mag., vol. 61, p. 376.—Tryon, Man., vol. 7, p. 13, fig. 78.
Santa Barbara, California, to Cerros Island, Lower California.

Family TRIVIIDAE.

Genus TRIVIA Gray, 1832.

TRIVIA RADIANS Lamarck, 1810.
Ann. du Mus. Paris, vol. 15, p. 102.—Tryon, Man., vol. 7, pl. 22, figs. 13, 14.
Santa Barbara and Catalina Island, California, to Ecuador.

TRIVIA SOLANDRI Gray, 1837.
Conch. Ill., *Cypraea*, No. 128, fig. 43.
Catalina Island, California, to Panama.

TRIVIA RITTERI Raymond, 1903.
Nautilus, vol. 17, No. 8, p. 85.
Monterey and San Pedro, California, to Cortez Bank.

TRIVIA SANGUINEA Gray, 1832.
Desc. Cat. *Cypraea*, p. 14.—Tryon, Man., vol. 7, pl. 22, figs. 21, 22.
Catalina Island. Magdalena Bay to Salina Cruz, Mexico. Ecuador?

TRIVIA CALIFORNIANA Gray, 1828.
Zool. Journ., vol. 3, p. 365.—Tryon, Man., vol. 7, pl. 22, figs. 18–20.
Crescent City, California, to West Mexico.

Genus ERATO, Risso, 1826.

ERATO VITELLINA Hinds, 1844.
Zool. Voy. *Sulphur*, Moll., p. 46, pl. 13, figs. 22, 23. Magdalena Bay.
Bodega Bay and Farallones Islands to San Diego, California.

ERATO ALBESCENS Dall, 1905.
Nautilus, vol. 18, No. 11, p. 124.
Off Santa Rosa Island, California, to La Paz, Lower California.

ERATO COLUMBELLA Menke, 1847.
Zeitschr. Mal., vol. 4, p. 183.—Tryon, Man., vol. 5, pl. 4, fig. 48.
Monterey, California, to Panama Bay.

Family RANELLIDAE.

Genus BURSA Bolten, 1798.

Subgenus BUFONARIA Schumacher, 1817.

BUFONARIA CALIFORNICA Hinds, 1843.

Ann. Mag. Nat. Hist., vol. 11, April, p. 255; Zool. Voy. *Sulphur*, Moll., pl. 2, figs. 4, 5.

Monterey, California, to Cerros Island, Lower California.

Family CYMATIIDAE.

Genus ARGOBUCCINUM Mörch, 1852.

Subgenus FUSITRITON Cossmann, 1903.

FUSITRITON OREGONENSIS Redfield, 1848.

Ann. Lyc. Nat. Hist. N. Y., vol. 4, p. 165, pl. 11, fig. 2.

From the line of floating ice in winter in Bering Sea near the Pribilof Islands, south on the west to the Okhotsk Sea and Japan, and on the east to San Nicolas Island, California; San Diego, in deeper water (Raymond).

Genus CYMATIUM Bolten, 1798.

CYMATIUM CORRUGATUM (Lamarck, 1822) TREMPERI Dall, 1907.

Nautilus, vol. 21, No. 8, p. 85.

San Pedro, California, to Gulf of California. Mediterranean?

CYMATIUM GIBBOSUM Broderip, 1833.

Proc. Zool. Soc., p. 7; Conch. Icon., *Triton*, pl. 13, fig. 38.

San Pedro and San Diego, California, to Panama. and Guayaquil.

Family SEGUENZIIDAE.

Genus SEGUENZIA Jeffreys, 1876.

SEGUENZIA CERTOMA Dall, 1919.

Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 343.

Off San Diego, California, in 600 fathoms.

SEGUENZIA GIOVIA Dall, 1919.

Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 343.

Off Catalina Island, California, in 118 fathoms.

SEGUENZIA CERVOLA Dall, 1919.

Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 344.

Off North Coronado Island, in 692 fathoms.

SEGUENZIA CALIANA Dall, 1919.

Proc. U. S. Nat. Mus., vol 56, No. 2295, p. 344.

Off La Jolla and San Diego, California, in 243 to 822 fathoms.

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ph/

Family TRIFORIDAE.

Genus TRIFORA (Deshayes) Blainville, 1828.

TRIFORA MONTEREYENSIS Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, No. 1569, p. 249, pl. 16, fig. 17.
Monterey, California.

TRIFORA PEDROANA Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, No. 1569, p. 250, pl. 16, fig. 1.
San Pedro, California, to South Coronado Island.

TRIFORA CALLIPYRGA Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, No. 1569, p. 251, pl. 16, fig. 4.
San Pedro to San Diego, California. San Martin Id. L. Cal. Baker.

TRIFORA CARPENTERI Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, No. 1569, p. 252, pl. 16, fig. 16.
Neah Bay, Washington.

TRIFORA CATALINENSIS Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, No. 1569, p. 253, pl. 16, fig. 18.
Catalina Island and Laguna Beach, California.

TRIFORA STEARNSI Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, No. 1569, p. 254, pl. 16, fig. 3.
San Diego, California, to the Gulf of California.

TRIFORA PENINSULARIS Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, No. 1569, p. 255, pl. 16, fig. 2.
San Diego, California, to Point Abreojos, Lower California.

Family CERITHIOPSIDAE.

Genus CERITHIOPSIS Forbes and Hanley, 1849.

Section CERITHIOPSIS s. s.

CERITHIOPSIS OXYS Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 40, p. 332, pl. 36, fig. 2.
Sàn Pedro, California, to Point Abreojos, Lower California.

CERITHIOPSIS CARPENTERI Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 40, p. 334, pl. 38, fig. 9.
San Pedro, California, to South Coronado Island.

CERITHIOPSIS PEDROANA Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, No. 1564, p. 181; vol. 40, pl. 38, fig. 2.
San Pedro, California, to Point Abreojos, Lower California.

CERITHIOPSIS BERRYI Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 40, p. 339, pl. 39, fig. 8.
Monterey Bay, California, to South Coronado Island. Pt. Abreojos, H. coll.

CERITHIOPSIS CESTA Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 40, p. 341, pl. 39, fig. 5.
San Diego, California.

Cerithiopsis fraseri Bartsch. 1921.
Proc. Biol. Soc. Wash. vol. 34, p. 34.
Clayoquot B.C. to Victoria, B.C.
Cerithiopsis onealensis Bartsch, 1921.
Proc. Biol. Soc. Wash. vol. 34, p. 35.
Oneal Island, Gulf of Georgia.

Cerithiopsis (Cerithiopsina) signa Bartsch. 1921.
Proc. Biol. Soc. Wash. XXXIV, p. 36.
Oneal Id. Puget Sound.
Cerithiopsis (Cerithiopsina) willetti Bartsch, 1921.
Proc. Biol. Soc. Wash. XXXIV, p. 36.
Forrester Id. Alaska, to Puget Sound.

CERITHIOPSIS STEJNEGERI Dall, 1884.
Proc. U. S. Nat. Mus., vol. 7, p. 345, pl. 2, fig. 4; vol. 40, p. 342, pl. 40, fig. 3.
Commander, Aleutian, and Shumagin Islands, Alaska.

CERITHIOPSIS STEJNEGERI DINA Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 40, p. 343, pl. 40, fig. 7.
Sitka, Alaska.

CERITHIOPSIS GRIPPI Bartsch, 1917.
Proc. U. S. Nat. Mus., vol. 56, p 669, pl. 46, fig. 12.
San Diego, California.

CERITHIOPSIS DIOMEDAE Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 40, p. 359, pl. 37, fig. 5.
San Diego, California, and Todos Santos Bay.

CERITHIOPSIS PARAMOEA Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 40, p. 356, pl. 38, fig. 4.
Neah Bay, Washington.

CERITHIOPSIS BAKERI Bartsch, 1917.
Proc. U. S. Nat. Mus., vol. 56, p. 670, pl. 46, fig. 10.
South Coronado Island, Lower California.

CERITHIOPSIS CHARLOTTENSIS Bartsch, 1917.
Proc. U. S. Nat. Mus., vol. 56, p. 668, pl. 46, figs. 9, 11.
Queen Charlotte Islands, British Columbia, to Puget Sound.

CERITHIOPSIS MONTEREYENSIS Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 40, p. 363, pl. 41, fig. 5.
Little River, Mendocino County, to Monterey, California.

Section CERITHIOPSIDA Bartsch, 1911.

CERITHIOPSIS DIEGENSIS Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 40, p. 347, pl. 40, fig. 4.
San Pedro to San Clemente Island, California, and South Coronado Island.

CERITHIOPSIS ROWELLI Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 40, p. 348, pl. 40, fig. 6.
California.

CERITHIOPSIS GLORIOSA Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 40, p 353, pl 36, fig. 7.
Off San Diego, California, in 15 fathoms. Pt. Abreojos. L. Cal. H. coll.

CERITHIOPSIS ANTEMUNDA Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 40, p. 359, pl. 36, fig. 4.
San Pedro to San Diego, California.

Section CERITHIOPSIDELLA Bartsch, 1911.

CERITHIOPSIS COSMIA Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, No. 1564, p. 180; vol. 40, pl. 38, fig. 7.
Monterey, California, to San Bartolome Bay, Lower California.

CERITHIOPSIS ANTEFILOSA Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 40, p. 349, pl. 40, fig. 9.
San Pedro to San Diego, California. S. Hippolito Pt. L. Cal. H. coll.

CERITHIOPSIS ALCIMA Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 40, p. 350, pl. 39, fig. 2.
San Pedro, California, to South Coronado Island. S. Geronimo, L. Cal. Lowe

INCERTAE SEDIS.

CERITHIOPSIS COLUMNA Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 660; Proc. U. S. Nat. Mus., vol. 40, p. 354, pl. 36, fig. 6.
Vancouver Island to Monterey Bay.

CERITHIOPSIS ARNOLDI Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 40, p. 357, pl. 39, fig. 3.
San Pedro Bay, California.

CERITHIOPSIS TRUNCATA Dall, 1886.
Proc. U. S. Nat. Mus., vol. 9, p. 304, pl. 4, fig. 5; vol. 40, pl. 40, fig. 2.
Unalaska Island, Alaska, to Puget Sound.

CERITHIOPSIS STEPHENSAE Bartsch, 1909.
Proc. U. S. Nat. Mus., vol. 37, p. 399, fig.; vol. 40, pl. 38, fig. 7.
Port Frederick, Alaska, to Puget Sound.

CERITHIOPSIS INGENS Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, p. 180; vol. 40, pl. 41, fig. 4.
Monterey, California.

CERITHIOPSIS TUMIDA Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, p. 179; vol. 40, pl. 41, fig. 3.
Monterey, California.

Genus SEILA A. Adams, 1861.

SEILA MONTEREYENSIS Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, No. 1564, p. 177; vol. 40, pl. 41, fig. 5.
Monterey to Todos Santos Bay, Lower California.

Genus METAXIA Monterosato, 1884.

METAXIA DIADEMA Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, No. 1564, p. 182.
Monterey to San Diego, California. S. Martin Id. L. Cal. Baker.

Family CERITHIIDAE.

Genus DIASTOMA Deshayes, 1861.

DIASTOMA FASTIGIATA Carpenter, 1864.
Suppl. Rep. Brit. Soc., p. 655; Proc. U. S. Nat. Mus., vol. 39, p. 581, fig. 1, 1911.
Santa Barbara, California. Pleistocene.

DIASTOMA OLDROYDAE Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 39, p. 583, fig. 3.
San Pedro, California.

< Cerithiopsis sassetta Dall, 1919. Proc. U.S.N. Mus. v. 56, p. 344. off Pt. Piños, Monterey Bay, 66-69 fms.

Pt. Abreojos, L. Cal. H. coll.

Alabina turrita Cpr. 1866. Proc. Cal. Acad. III, p. 219,
Proc. U. S. N. Mus. v. 39, p. 410, pl. 62, f. 4. 1911, Jan. S. Pedro.

Alabina occidentalis Hemphill, 1894, Zoë, vol. 4, p. 395
Proc. U. S. N. Mus. v. 39, p. 410, pl. 62, f. 2, 1911.

DIASTOMA STEARNSI Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 39, p. 584, fig. 4.
San Diego, California.

Genus ALABINA Dall, 1902. = Fenella A. Ads, 1860.

No, the latter is preoccupied, by Westwood, 1840.

ALABINA CALIFORNICA Dall and Bartsch, 1901.
Nautilus, vol. 15, p. 58; Proc. U. S. Nat. Mus., vol. 39, p. 414, pl. 62, fig. 7.
San Pedro, California. Pleistocene.

ALABINA BARBARENSIS Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 39, p. 411, pl. 61, fig. 3.
Santa Barbara, California. Pleistocene.

ALABINA HAMLINI Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 39, p. 411, pl. 61, fig. 2.
Los Angeles, California. Pleistocene.

ALABINA PHANEA Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 39, p. 412, pl. 62, fig. 6.
San Diego, California.

ALABINA IO Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 39, p. 415, pl. 61, fig. 1.
Signal Hill, Long Beach, California. Pleistocene.

ALABINA TENUISCULPTA Carpenter, 1864.
Suppl. Rep. Brit Assoc., pp. 612, 655; Proc. U. S. Nat. Mus., vol. 39, p. 415, pl. 61, fig. 6.
San Pedro, California, to Magdalena Bay.

ALABINA TENUISCULPTA PHALACRA Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 39, p. 417, pl. 61, fig. 5.
San Diego, California.

ALABINA DIEGENSIS Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 39, p. 416, pl. 61, fig. 4.
San Pedro, California, to San Bartolome Bay, Lower California.

ALABINA? CALENA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 345.
Off San Luis Obispo Bay, California, in 252 fathoms.

Genus BITTIUM (Leach) Gray, 1847.

Subgenus BITTIUM s. s.

BITTIUM JOHNSTONAE Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 40, p. 387, pl. 53, fig. 6.
Laguna Beach, California, to Lower California.

Subgenus STYLIDIUM Dall, 1907.

STYLIDIUM ESCHRICHTII Middendorff, 1849.
Beitr. Mal. Rossica., vol. 2, p. 68, pl. 11, fig. 1.
Sitka, Alaska, to Puget Sound.

STYLIDIUM ESCHRICHTII ICELUM Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, No. 1564, p. 178; vol. 40, pl. 57, fig. 3.
Fuca Strait to Monterey, California.

STYLIDIUM ESCHRICHTII MONTEREYENSE Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 33, No. 1564, p. 178; vol. 40, p. 58, fig. 5.
Crescent City, California, to Cape San Lucas. Also Pliocene.

STYLIDIUM PAGANICUM Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 345.
Off Monterey Bay, California, in 356 fathoms.

Subgenus SEMIBITTIUM Cossmann, 1896..

SEMIBITTIUM VANCOUVERENSE Dall and Bartsch, 1910.
Canada Geol. Survey Mem., vol. 14 N, p. 10, pl. 1, fig. 8.
Barkley Sound, Vancouver Island.

SEMIBITTIUM ATTENUATUM Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 655; Proc. U. S. Nat. Mus., vol. 40, p. 393, pl. 54, figs. 1, 2, 5.
Forrester Island, Alaska, to San Diego. S. Martin Id. L. Cal, Baker.

SEMIBITTIUM ATTENUATUM BOREALE Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 40, p. 395, pl. 54, fig. 4.
Queen Charlotte Islands to Vancouver Island.

SEMIBITTIUM ATTENUATUM MULTIFILOSUM Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 40, p. 395, pl. 54, fig. 3.
Monterey to San Pedro, California.

SEMIBITTIUM ATTENUATUM LATIFILOSUM Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 40, p. 395, pl. 54, fig. 6.
San Pedro, California.

SEMIBITTIUM SUBPLANATUM Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 40, p. 395, pl. 57, fig. 5.
Monterey Bay to South Coronado Island.

SEMIBITTIUM RUGATUM Carpenter, 1866.
Ann. Mag. Nat. Hist., ser. 3, vol. 18, p. 276; Proc. U. S. Nat. Mus., vol. 40, p. 397, pl. 56, figs. 4, 5.
San Pedro and Catalina Island. Santa Barbara Pleistocene.

SEMIBITTIUM QUADRIFILATUM Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 655; Proc. U. S. Nat. Mus., vol. 40, p. 398, pl. 58, figs. 2, 3, 1911.
Monterey, California, to San Ignacio Lagoon, Lower California.

? SEMIBITTIUM ARMILLATUM Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 655; Proc. U. S. Nat. Mus., vol. 40, p. 391, pl. 52, fig. 6.
Santa Barbara and San Pedro, California. Pleistocene.

? SEMIBITTIUM PURPUREUM Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 660; Proc. U. S. Nat. Mus., vol. 40, pl. 52, figs. 1, 3.
Monterey to San Diego, California.

Todos Santos Bay, L. Cal. H. coll.

? **SEMIBITTIUM CHALLISAE Bartsch, 1917.**
Proc. U. S. Nat. Mus., vol. 52, p. 673, pl. 47, figs. 2, 6.
San Juan Island, Gulf of Georgia.

? **SEMIBITTIUM SANJUANENSE Bartsch, 1917.**
Proc. U. S. Nat. Mus., vol. 52, p. 674, pl. 47, fig. 4.
San Juan Island, Gulf of Georgia.

? **SEMIBITTIUM SERRA Bartsch, 1917.**
Proc. U. S. Nat. Mus., vol. 52, p. 675, pl. 47, fig. 1.
Off Point Pinos to San Diego, California, in 75 fathoms, and San Bartolome Bay, Lower California.

Subgenus LIROBITTIUM Bartsch, 1911.

LIROBITTIUM INTERFOSSA Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 656; Proc. U. S. Nat. Mus., vol 40, p. 401, pl. 51, figs. 2, 6.
Monterey to San Diego, California. Todos Santos Bay, H coll.

LIROBITTIUM CATALINENSE Bartsch, 1907.
Smithsonian Misc. Coll., vol. 50, p. 28, pl. 57, fig. 13.
Catalina Island to San Diego. Santa Barbara Pleistocene.

LIROBITTIUM CATALINENSE INORNATUM Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 40, p. 403, pl. 51, fig. 3.
Catalina Island to San Diego. Also Pleistocene.

LIROBITTIUM ORNATISSIMUM Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 40, p. 403, pl. 52, figs. 4, 5.
San Pedro, California. Santa Barbara Pleistocene.

LIROBITTIUM MUNITUM Carpenter, 1864.
Suppl. Rep. Brit. Assoc., pp. 628, 660; Proc. U. S. Nat. Mus., vol 40, pl. 53, figs. 1, 2.
Sitka Sound to Fuca Strait.

LIROBITTIUM MUNITUM MUNITOIDE Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 40, p. 405, pl. 53, fig. 4.
San Pedro, California.

LIROBITTIUM ASPERUM Gabb, 1861.
Proc. Acad. Nat. Sci. Phila., p. 368; Proc. U. S. Nat. Mus., vol. 40, p. 405, pl. 56, fig. 3.
Pleistocene: Santa Barbara to San Diego. Also Pliocene.

LIROBITTIUM ASPERUM LOMAËNSE Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 40, p. 406, pl. 56, fig. 2.
Catalina Island to San Diego, California. Ballenas Lagoon. L. Cal. H. coll.

LIROBITTIUM LARUM Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 40, p. 407, pl. 57, fig. 4.
San Pedro, California, to San Bartolome Bay, Lower California.

INSERTAE SEDIS.

BITTIUM OLDROYD~~I~~ Bartsch, 1911. ae/
Proc. U. S. Nat. Mus., vol. 40, p. 408, pl. 51, fig. 5.
Destruction Island, Washington, to Lower California.

BITTIUM FETELLUM Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 40, p. 409, pl. 51, fig. 4.
Off Catalina Island in 16 fathoms.

BITTIUM GIGANTEUM Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 40, p. 410, pl. 55, fig. 2.
Pleistocene of San Pedro and San Diego, California.

Genus POTAMIDES Brongniart, 1810.

Subgenus Pirenella Gray, 1847.

PIRENELLA CYCLUS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 346.
Long Beach, California, to Gulf of California.

Subgenus Liocerithium Tryon, 1887.

LIOCERITHIUM SCULPTUM Sowerby, 1855.
Thes. Conch., vol. 2, p. 868, figs. 144, 145.
Santa Barbara Islands, California, to Panama and the Galapagos Islands.

Genus CERITHIDEA Swainson, 1840.

CERITHIDEA CALIFORNICA Haldeman, 1840.
Mon. Freshwater Shells, N. Amer., cover of No. 1.—Tryon, Man., vol. 9, pl. 33, figs. 69, 70, 71.
Baulinas Bay to San Diego, California. S. Martin Id. L. Cal. Baker

Family TRICHOTROPIDAE.

Genus TRICHOTROPIS Sowerby, 1829.

TRICHOTROPIS BICARINATA Sowerby, 1825.
Tankerville Catalogue, pp. 55, XII, pl. 9.
Arctic Ocean from Point Barrow south, on the west to the Okhotsk Sea and Shantar Islands, and on the east to Nunivak Island, Bering Sea.

TRICHOTROPIS CONICA Moller, 1842.
Index Moll. Grönl., p. 82.—Tryon, Man., vol. 9, pl. 7, fig. 45.
Forrester Island, Alaska; also Greenland.

TRICHOTROPIS ~~COSTELLATA Couthouy, 1838.~~ Sowerby, 1829, as borealis.
Boston Journ. Nat. Hist., vol. 2, p. 108, pl. 3, fig. 2. Zool. Journ. IV, p. 375.
Arctic Seas, Bering Sea, the Aleutian Islands and south to the Queen Charlotte Islands, British Columbia; also New England coast.

TRICHOTROPIS CANCELLATA Hinds, 1843.
Proc. Zool. Soc., p. 17; Zool. Voy. *Sulphur*, Moll., pl. 11, figs. 11, 12.
Southern part of Bering Sea, and south to Oregon.

TRICHOTROPIS INSIGNIS Middendorff, 1849.
Beitr. Mal. Rossica, p. 107, pl. 10, fig. 7–9.
From Bering Strait south, on the west to Northern Japan, and on the east to the Aleutian Islands and Cooks Inlet, Alaska.

Lampania cumingi Crosse, from oysterbeds at Bellingham Bay, fide Oldroyd. Imported.

S. Ignacio Lagoon, L. Cal. H. coll.

Not Iphinoë Spence Bate, 1856, Crustacea

Subgenus Iphinoë H. and A. Adams, 1854.

IPHINOË CORONATA Gould, 1860. (Plate 11, fig. 2.)
Proc. Boston Soc. Nat. Hist., vol. 7, p. 324.—Tryon, Man., vol. 7, pl. 7, figs. 53, 54.
Arctic Ocean and Bering Sea.

IPHINOË KROYERI Philippi, 1849. (Plate 11, fig. 1.)
Zeitschr. f. Mal., vol. 5, p. 175.—Tryon, Man., vol. 7, pl. 8, fig. 61.
Arctic and Bering Seas, eastward to the Shumagin Islands.

IPHINOË KELSEYI Dall, 1905.
Proc. U. S. Nat. Mus., vol. 34, No. 1610, p. 254.
Off San Diego, Cal., and Point San Quentin, Lower California.

Subgenus Provanna Dall, 1918.

PROVANNA LOMANA Dall, 1918.
Proc. Biol. Soc. Wash., vol. 31, p. 7.
Off Point Loma, San Diego County, California, in 650 fathoms.

Family CAECIDAE.

Genus CAECUM Fleming, 1817.

CAECUM CALIFORNICUM Dall, 1885.
Proc. U. S. Nat. Mus., vol. 8, p. 541.—Tryon, Man., vol. 8, pl. 66, fig. 65.
Monterey, California, to Lower California.

CAECUM DALLI Bartsch, 1920.
Journ. Wash. Acad. Sci., vol. 10, 1920, p. 568,
San Pedro, California, to Lower California.

CAECUM LICALUM Bartsch, 1920.
Journ. Wash. Acad. Sci., vol. 10, 1920, p. 568,
Monterey to San Diego, California.

CAECUM DIEGENSE Bartsch, 1920.
Journ. Wash. Acad. Sci., vol. 10, 1920, p. 568
San Diego, California.

CAECUM GRIPPI Bartsch, 1920.
Journ. Wash. Acad. Sci., vol. 10, 1920, p. 568,
Off San Diego, 15 to 20 fathoms.

Genus MICRANELLUM Bartsch, 1920.

MICRANELLUM CREBRICINCTUM Carpenter, 1864.
Proc. Cal. Acad. Sci., vol. 3, p. 215.—Tryon, Man., vol. 8, pl. 67, figs. 71, 83.
Monterey, California, to Todos Santos Bay, Lower California. S. Martin Id. Baker,

MICRANELLUM PEDROËNSE Bartsch, 1920.
Journ. Wash. Acad. Sci., vol. 10, 1920, p. 568.
San Pedro to San Diego, California.

MICRANELLUM CATALINENSE Bartsch, 1920.
Journ. Wash. Acad. Sci., vol. 10, 1920, p. 569.
Santa Rosa and Santa Catalina Islands, California.

MICRANELLUM PROFUNDICOLUM Bartsch, 1920.
Journ. Wash. Acad. Sci., vol. 10, 1920, p. 569,
Off San Diego, 55 to 199 fathoms.

MICRANELLUM OREGONENSE Bartsch, 1920.
Journ. Wash. Acad. Sci., vol. 10, 1920, p. 569,
Forrester Island, Alaska, to Monterey, California.

MICRANELLUM BARKLEYENSE Bartsch, 1920.
Journ. Wash. Acad. Sci., vol. 10, 1920, p. 569,
Barkley Sound, Vancouver Island.

MICRANELLUM ROSANUM Bartsch, 1920.
Journ. Wash. Acad. Sci., vol. 10, 1920.
Off Santa Rosa Island, California, in 48 fathoms.

Genus FARTULUM Carpenter, 1858.

FARTULUM ORCUTTI Dall, 1885.
Proc. U. S. Nat. Mus., vol. 8, p. 541.
San Pedro to Mazatlan, Mexico.

FARTULUM HEMPHILLI Bartsch, 1920.
Journ. Wash. Acad. Sci., vol. 10, 1920, p. 566,
San Pedro, California, to Point Abreojos, Lower California.

FARTULUM OCCIDENTALE Bartsch, 1920.
Journ. Wash. Acad. Sci., vol. 10, 1920, p. 566.
Gulf of Georgia to Lower California.

FARTULUM BAKERI Bartsch, 1920.
Journ. Wash. Acad. Sci., vol. 10, 1920, p. 566.
Ellamar, Alaska, to Mazatlan, Mexico.

Genus ELEPHANTULUM Carpenter, 1858.

ELEPHANTULUM CARPENTERI Bartsch, 1920.
Journ. Wash. Acad. Sci., vol. 10, 1920, p. 567.
San Pedro, California, to Point Abreojos, Lower California.

Family VERMETIDAE.

Genus BIVONIA Gray, 1850.

BIVONIA COMPACTA Carpenter, 1864.
Ann. Mag. Nat. Hist., ser. 3, vol. 14, p. 427.
Vancouver Island to San Pedro, California (Peru, Cooper).

Genus VERMICULARIA Lamarck, 1799.

VERMICULARIA EBURNEA Reeve, 1842.
Conch. Syst., vol. 2, p. 46, pl. 152, fig. 2.
San Pedro, California, to Panama.

Pt. Vincente, Chace.

S. Hippolitō Pt, L. Cal. H. coll.

Genus ALETES Carpenter, 1857.

ALETES SQUAMIGERUS Carpenter, 1856.
Proc. Zool. Soc., p. 226.—Tryon, Man., pl. 54, figs. 73, 74.
Monterey, California, to Payta, Peru, and the Galapagos Islands.

ALETES CENTIQUADRUS Valenciennes, 1846.
Voy. *Venus*, Atlas, pl. 11, fig. 1*a*.
San Diego, California, to Panama.

Genus VERMICULUM Montagu, 1803.

VERMICULUM ANELLUM Mörch, 1861.
Proc. Zool. Soc., p. 359.—Tryon, Man., vol. 8, pl. 49, fig. 34.
Monterey, California, to Todos Santos Bay, Lower California.

Genus SPIROGLYPHUS Daudin, 1800.

SPIROGLYPHUS LITUELLUS Mörch, 1861.
Proc. Zool. Soc., p. 154.—Tryon, Man., vol. 8, pl. 54, fig. 82.
Forrester Island, Alaska, to San Diego, California. Afognak Id. Eyerdam.

Genus PETALOCONCHUS Lea, 1843.

PETALOCONCHUS MACROPHRAGMA Carpenter, 1857.
Mazatlan Cat., p. 309.—Tryon, Man., vol. 8, pl. 48, fig. 16.
San Diego, California, to Panama.

PETALOCONCHUS MONTEREYENSIS Dall, 1919.
Proc. Biol. Soc. Wash., vol. 32, p. 250.
Monterey, California. Catalina Id. San Pedro.

PETALOCONCHUS COMPLICATUS Dall, 1908.
Bull. Mus. Comp. Zool., vol. 43, p. 326.
Puget Sound to Panama.

Genus THYLACODES Guettard, 1774.

THYLACODES ERUCIFORMIS Mörch, 1861. 2/
Proc. Zool. Soc., p. 70. Feb. 1862,
"California" (Mörch).

Family TURRITELLIDAE.

Genus TURRITELLA Lamarck, 1799.

TURRITELLA NODULOSA King, 1831.
Zool. Journ., vol. 5, p. 347.—Tryon, Man., vol. 8, pl. 63, figs. 78, 79.
San Diego, California, to Panama.

TURRITELLA MARIANA Dall, 1908.
Bull. Mus. Comp. Zool., vol. 43, No. 6, p. 327, pl. 11, fig. 14.
Catalina Island, California, to Panama Bay.

TURRITELLA JEWETTII Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 655; Ann. Mag. Nat. Hist., ser. 3, vol. 17, p. 276.
Santa Barbara, California, to Salina Cruz, Mexico. Also Pleistocene.

4/ **TURRITELLA COOPERI Carpenter, 186~~6~~.**
Proc. Cal. Acad. Sci., vol. 3, p. 216.—Tryon, Man., vol. 8, p. 200, pl. 61, fig. 61.
Monterey to San Diego, California. Cerros Id. 20 fms. Baker.

Genus TURRITELLOPSIS G. O. Sars, 1878.

TURRITELLOPSIS ACICULA STIMPSONI Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 347.—Sars, Moll. Reg. Arct. Norv., pl. 10, fig. 14.
Nunivak Island, Alaska, to San Diego, California. Circumboreal.

Genus TACHYRHYNCHUS Mörch, 1868.

TACHYRHYNCHUS EROSUS Couthouy, 1838.
Boston Journ. Nat. Hist., vol 2, p. 103, pl. 3, fig. 1.
Arctic Ocean, south on the west to the Kuril Islands, and on the east to the Aleutian Islands and Kodiak, Alaska. Also Greenland.

TACHYRHYNCHUS EROSUS MAJOR Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 346.
Mouth of the Colville River, Arctic Alaska and south through the eastern part of Bering Sea to the Pribilof and Unimak Islands.

TACHYRHYNCHUS RETICULATUS Mighels, 1842.
Boston Journ. Nat. Hist., vol. 4, p. 50, pl. 4, fig. 19. Proc. 1841. p. 50.
Arctic Ocean and eastern Bering Sea to the Aleutian Islands and southward to British Columbia. Also Greenland.

TACHYRHYNCHUS LACTEOLUS Carpenter, 1865. (Plate 6, fig. 2.)
Proc. Acad. Nat. Sci. Phila., p. 62.
Chignik Bay, Alaska Peninsula, east and south to Point Abreojos, Lower California.

TACHYRHYNCHUS LACTEOLUS SUBPLANATUS Carpenter, 1865.
Proc. Acad. Nat. Sci. Phila., p. 62.
Puget Sound to San Diego, California.

? TACHYRHYNCHUS PRATOMUS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 347.
Semidi Islands, Alaska, in 20 fathoms, to Lower California.

? TACHYRHYNCHUS STEARNSII Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 347.
San Pedro, California.

Family LITTORINIDAE.

Genus LITTORINA (Ferussac, 1822.) Blainville, 1828.

Section ~~LITTORINA s. s~~. Neritoides Brown 1827

LITTORINA PALLIATA Say, 1822.
Journ. Acad. Nat. Sci. Phila., vol. 2, p. 240; Gould, Inv. Mass., p. 261, fig. 177.
Atlantic. Pliocene of Nome, Alaska, (not known living on the Pacific side).

S. Ignacio Lagoon, L. Cal. H. coll.

Littorina mandshurica Schrenck, from oysterbeds at Bellingham Bay, fide Oldroyd. Exotic.

Littorina s.s. Blainville 1828.

Section ~~ALGARODA Dall, 1918.~~

LITTORINA SQUALIDA Broderip and Sowerby, 1829.
Zool. Journ., vol. 4, p. 370; Zool. Beechey's Voy., p. 139, pl. 34, fig. 12.—Middendorff, Beitr. Mal. Rossica, vol. 2, p. 57; Sibirische Reise, pl. 11, figs. 4–10.

Cape York, Arctic Ocean, to Pribilof Islands and the Okhotsk Sea.

Section LITTORIVAGA Dall, 1918.

LITTORINA SITCHANA Philippi, 1845. k/
Proc. Zool. Soc., p. 140.—Tryon, Man., vol. 9, p. 240, pl. 41, fig. 90.

Southern Bering Sea, both coasts, and southward on the east to Puget Sound.

LITTORINA ATKANA Dall, 1886.
Proc. U. S. Nat. Mus., vol. 9, p. 211; vol. 24, pl. 39, fig. 11.

Kyska Island, Alaska, and eastward to Cook's Inlet.

LITTORINA ALEUTICA Dall, 1872.
Proc. Cal. Acad. Sci., vol. 4, p. 271, pl. 1, fig. 3; Proc. U. S. Nat. Mus., vol. 24, pl. 39, figs. 4, 6.

Pribilof Islands and the Aleutians from Kyska eastward to the Chika Islands, on isolated islets.

LITTORINA GRÖNLANDICA Menke, 1830.
Synopsis, p. 45.—Tryon, Man., vol. 9, pl. 41, fig. 7.

The Okhotsk and Bering seacoasts and eastward to Sitka, Alaska; Puget Sound? Also Greenland.

LITORINA RUDIS Donovan, 1800. t/
British Shells, vol. 1, pl. 33, fig. 3.

Aleutian Islands to Puget Sound. Also Atlantic.

LITORINA PLANAXIS Philippi, 1847. t/
Abb. u. Beschr., *Littorina*, pl. 4, fig. 16.

From Puget Sound south to Magdalena Bay, Guadelupe and Socorro Islands.

Subgenus MELARHAPHE (Mühlfeldt) Menke, 1828.

MELARHAPHE SCUTULATA Gould, 1849.
Proc. Boston Soc., Nat. Hist., vol. 3, p. 83.—Tryon, Man., vol. 9, pl. 45, figs. 98–100; 1–3.

Kodiak Island, Alaska, south to Turtle Bay, Lower California, and Socorro Island.

Subgenus ALGAMORDA Dall, 1918.

ALGAMORDA NEWCOMBIANA Hemphill, 1876. **(Plate 5, fig. 5.)**
Proc. Cal. Acad. Sci., vol. 7, p. 49; Cat. N. Amer. Shells, p. 6, No. 537.

Humboldt Bay, California.

? ALGAMORDA SUBROTUNDATA Carpenter, 1865. 4/
Ann. Mag. Nat. Hist., ser. 3, vol. 14, p. 28.

Neah Bay, Washington.

? ALGAMORDA CASTANEA Carpenter, 1865.
Ann. Mag. Nat. Hist., ser. 3, vol. 14, p. 28. 1865 (as Paludinella)

Neah Bay, Washington.

Family LACUNIDAE.

Genus LACUNA Turton, 1827.

LACUNA PORRECTA Carpenter, 1864. **(Plate 14, fig. 2.)**

Suppl. Rep. Brit. Assoc., p. 656; Ann. Mag. Nat. Hist., ser. 3, vol. 14, p. 428.—Tryon, Man., vol. 9, p. 265, pl. 50, fig. 55.

Commander Islands, Bering Sea, southward and eastward to San Diego, California.

LACUNA PORRECTA EFFUSA Carpenter, 1864.

Suppl. Rep. Brit. Assoc., p. 656; Ann. Mag. Nat. Hist., ser. 3, vol. 14, p. 428.—Tryon, Man., vol. 9, pl. 50, fig. 56.

Fuca Strait to San Francisco, California.

LACUNA PORRECTA EXAEQUATA Carpenter, 1864.

Suppl. Rep. Brit. Assoc., p. 656; Ann. Mag. Nat. Hist., ser. 3, vol. 14, p. 428.—Tryon, Man., vol. 9, pl. 50, fig. 57.

Neah Bay, Washington.

LACUNA PORRECTA PUTEOLOIDES (Carpenter MS.) Dall, 1919.

Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 349.

Lobitas, California.

LACUNA GLACIALIS Moller, 1842.

Index Moll. Grönl., p. 9.—Tryon, Man., vol. 9, pl. 50, fig. 76.

St. Paul Island, Pribilof group. Also Greenland.

LACUNA DIVARICATA Fabricius, 1780.

Fauna Grönlandica, p. 392.—Tryon, Man., vol. 9, pl. 50, fig. 75.

Norton Sound, Alaska, and south to Santa Barbara, California, also Pliocene. Also Northern Europe and Greenland.

LACUNA SOLIDULA Lovèn, 1846.

Index Moll. Scand., p. 23.—Tryon, Man., vol. 9, pl. 50, fig. 69.

Ellamar, Alaska Puget Sound, Washington, to San Diego, California. Also Atlantic.

LACUNA VARIEGATA Carpenter, 1864.

Suppl. Rep. Brit. Assoc., p. 656.—Tryon, Man., vol. 9, pl. 50, fig. 64 ?

Neah Bay, Washington, to Monterey, California. Sta. Barbara.

LACUNA UNIFASCIATA Carpenter, 1856.

Proc. Zool. Soc., p. 205.—Tryon, Man., vol. 9, pl. 50, fig. 74.

Baulinas B., Santa Barbara, California, to Magdalena Bay, Lower California.

LACUNA UNIFASCIATA AURANTIACA Carpenter, 1856.

Proc. Zool. Soc., p. 205.

Santa Barbara, California, to Point Abreojos, Lower California.

LACUNA MARMORATA Dall, 1919.

Proc. U. S. Nat. Mus., vol. 56, p. 348.—Tryon, Man., vol. 9, pl. 50, fig. 58.

Saginaw Bay, Alaska, to San Diego, California.

Subgenus Boetica Dall, 1918.

BOETICA VAGINATA Dall, 1918.

Proc. Biol. Soc. Wash., vol. 21, p. 137; Proc. U. S. Nat. Mus., vol. 56, p. 349.

Santa Rosa Island, in 53 fathoms, and off La Jolla, San Diego, County, California, 199 fathoms.

L. marmorata var. olla Dall. 1919, Proc. U.S. N. Mus. vol, 56 p.349.
Olga, Wash.

Genus HALOCONCHA Dall, 1886.

HALOCONCHA REFLEXA Dall, 1884.
Proc. U. S. Nat. Mus., vol. 7, p. 344, pl. 2, figs. 1–3.
Pribilof Islands

HALOCONCHA MINOR Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 350.
Commander, Pribilof and Aleutian Islands eastward to Chirikoff Island, Alaska.

Genus AQUILONARIA Dall, 1886.

AQUILONARIA TURNERI Dall, 1886.
Proc. U. S. Nat. Mus., vol. 9, p. 204, pl. 3, figs. 1–3.
Arctic Ocean near Bering Strait. Also Labrador.

Family FOSSARIDAE.

Genus FOSSARUS Philippi, 1840.

FOSSARUS PARCIPICTUS Carpenter, 1864.
Ann. Mag. Nat. Hist., ser. 3, vol. 13, p. 476.
Todos Santos Bay, Lower California, to Panama.

FOSSARUS ANGIOLUS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 350.
Todos Santos Bay near San Diego, California.

Genus ISELICA Dall, 1918.

ISELICA FENESTRATA Carpenter, 1864. (Plate 13, fig. 2.)
Ann. Mag. Nat. Hist., ser. 3, vol. 14, p. 429.—Tryon, Man., vol. 9, p. 272, pl. 52, fig. 11.
Puget Sound to the Gulf of California.

ISELICA OBTUSA Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 656; Proc. Cal. Acad. Sci., vol. 3, p. 217.
Monterey to San Diego, California.

ISELICA OBTUSA LAXA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 251.
Vancouver Island and Puget Sound. Departure Bay, B. C.

Family LITIOPIDAE.

Genus LITIOPA Rang, 1829.

LITIOPA BOMBYX Rang, 1829.
Ann. Sci. Nat., p. 203.—Tryon, Man., vol. 9, pl. 53, fig. 74.
Southern California and Gulf of California. Pelagic.

Genus ALABA A. Adams, 1862.

ALABA JEANETTAE Bartsch, 1910.
Proc. U. S. Nat. Mus., vol. 39, p. 155, figs. 3, 4.
San Pedro, California, to Gulf of California.

ALABA CATALINENSIS Bartsch, 1920.
Journ. Wash. Acad. Sci., vol. 10, 1920, p. 572.
Catalina Island, California.

Family ?

Genus DIALA A. Adams, 1861.

Barleeia **DIALA MARMOREA Carpenter, 1864.**
Suppl. Rep. Brit. Assoc., p. 657; Proc. Cal. Acad. Sci., vol. 3, p. 218.—Tryon, Man., vol. 9, pl. 53, fig. 87.
Queen Charlotte Islands, British Columbia, to San Pedro, California.
San Martin Id. L. Cal. Baker.

DIALA ACUTA Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 657; Proc. Cal. Acad. Sci., vol. 3, p. 218.—Tryon, Man., vol. 9, pl. 53, fig. 86 ?
Monterey, California, to Coronado Islands. S. Hippolito Pt. L. Cal. H. coll.

DIALA EXILIS Tryon, 1866.
Amer. Journ. Conch., vol. 2, p. 12, pl. 2, fig. 18.
San Francisco Bay to San Diego, California.

Genus BARLEEIA Clark, 1855.

BARLEEIA HALIOTIPHILA Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 656; Journ. de Conchyl., vol. 12, p. 144.—Tryon, Man., vol. 9, pl. 60, fig. 74.
Mendocino County, California, to Lower California. S. Martin Id. Baker

BARLEEIA SANJUANENSIS Bartsch, 1920.
Proc. U. S. Nat. Mus., vol. 58, p. 170, pl. 13, fig. 3.
San Juan Islands, Gulf of Georgia.

57 **BARLEEIA SUBTENUIS Carpenter, 1864.**
Suppl. Rep. Brit. Assoc., p. 656; ~~Proc. Cal. Acad. Sci., vol. 3, p. 218.—~~Tryon, Man., vol. 9, pl. 60, fig. 73.
San Pedro, California, to San Ignacio Lagoon, Lower California.

BARLEEIA SUBTENUIS RIMATA Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 656; Journ. de Conchyl., vol. 12, p. 144.
San Diego, California.

BARLEEIA CORONADOËNSIS Bartsch, 1920.
Proc. U. S. Nat. Mus., vol. 58, p. 175, pl. 13, fig. 5.
Off Coronado Island in 7 to 10 fathoms.

BARLEEIA DALLI Bartsch, 1920.
Proc. U. S. Nat. Mus., vol. 58, p. 168, pl. 13, fig. 10.
Off Point Loma, California, in 75 fathoms.

BARLEEIA BENTLEYI Bartsch, 1920.
Proc. U. S. Nat. Mus., vol. 58, p. 168, pl. 13, fig. 2.
Venice, California.

BARLEEIA OLDROYDI Bartsch, 1920.
Proc. U. S. Nat. Mus., vol. 58, p. 171, pl. 13, fig. 9.
Mink Bay, Vancouver Island, to Coronado Islands.

Journ. de Conch. 3rd ser. vol. 5, p. 143, 1865

< Barleeia alderi Cpr. 1856, Mazatlan Shells, p. 362; Proc
U.S.N. Mus. v. 58, p. 175, pl. 12, f. 6, 1920. La Jolla. Kelsey.

Genus Rissoella Gray, 1847.

Syn. Jeffreysia Alder, 1850.

Rissoella bifasciata Cpr. 1856, Maz. Cat. p. 362,
Proc. U. S. N. Mus. vol. 58, p. 162, pl. 12, fig. 2, 1920.
San Nicolas Id. La Jolla (fide Baker) Coronado Ids &
Mazatlan

BARLEEIA CALIFORNICA Bartsch, 1920.
Proc. U. S. Nat. Mus., vol. 58, p. 173, pl. 13, fig. 7.
San Pedro, California, to Point Abreojos, Lower California.

Family RISSOIDAE.

Genus CINGULA Fleming, 1828.

CINGULA MARTYNI Dall, 1886.
Proc. U. S. Nat. Mus., vol. 9, p. 306, pl. 3, fig. 9.
Bering Strait to the Aleutians and eastward to Chignik Bay, Alaska.

CINGULA MARTYNI SCIPIO Dall, 1886.
Proc. U. S. Nat. Mus., vol. 9, p. 306, pl. 4, fig. 10.
Pribilof Islands to the Aleutians and eastward to Middleton Island, Alaska.

CINGULA ALASKANA Bartsch, 1912.
Proc. U. S. Nat. Mus., vol. 41, p. 486, pl. 41, fig. 4.
Amchitka Island, Aleutians.

CINGULA ALEUTICA Dall, 1886.
Proc. U. S. Nat. Mus., vol. 9, p. 307, pl. 3, fig. 11.
Pribilof Islands to the Aleutians and eastward to Windfall Harbor, Admiralty Island, Alaska.

CINGULA KATHERINAE Bartsch, 1912.
Proc. U. S. Nat. Mus., vol. 41, p. 488, pl. 41, fig. 3.
Windfall Harbor, Admiralty Island, Alaska.

CINGULA MONTEREYENSIS Bartsch, 1912.
Proc. U. S. Nat. Mus., vol. 41, p. 488, pl. 41, fig. 1.
Monterey, California.

? CINGULA CALIFORNICA Tryon, 1865.
Amer. Journ. Conch., vol. 1, p. 221, pl. 22, fig. 11.
San Francisco Bay to San Pedro, California.

? CINGULA ORVIETA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 351.
San Diego, California.

Subgenus NODULUS Monterosato, 1878.

NODULUS CERINELLUS Dall, 1886.
Proc. U. S. Nat. Mus., vol. 9, p. 307, pl. 4, fig. 12.—BARTSCH, Proc. U. S. Nat. Mus., vol. 61, p. 289, fig. 1.
Kyska and Amchitka Islands, Alaska.

NODULUS ASSER Bartsch, 1910.
Nautilus, vol. 23, No. 11, p. 138, pl. 11, fig. 9.
Atka Island, Aleutians, to Cook's Inlet,

NODULUS KELSEYI Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 41, p. 290, fig. 3.
San Diego, California, and the South Coronado Island. Pt. Abreojos, L. Cal. H. coll.

NODULUS KYSKENSIS Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 41, p. 291, fig. 4.
Kyska and Atka Islands, Aleutians.

NODULUS PALMERI Dall, 1919.
Proc. Biol. Soc. Wash., vol. 32, p. 251.
Pribilof Islands, Bering Sea.

Genus SKENEOPSIS Iredale, 1915.

SKENEOPSIS ALASKANA Dall, 1919.
Proc. Biol. Soc. Wash., vol. 32, p. 251.
Pribilof and Unalaska Islands, Alaska.

Genus AMPHITHALAMUS Carpenter, 1865.

4?/ **AMPHITHALAMUS INCLUSUS Carpenter, 186~~5~~.**
Ann. Mag. Nat. Hist., ser. 3, vol. 15, p. 181; Proc. U. S. Nat. Mus., vol. 41, p. 264, fig. 2.
Catalina Island to San Diego, California. San Martin Id. L. Cal. Baker

AMPHITHALAMUS LACUNATUS Carpenter, 1866.
Proc. Cal. Acad. Sci., vol. 3, p. 218; Proc. U. S. Nat. Mus., vol. 41, p. 263, fig. 1.
San Pedro, California. San Diego.

AMPHITHALAMUS TENUIS Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 41, p. 264, fig. 3.
Monterey to San Diego, California.

Genus ALVANIA (Leach) Risso, 1826.

ALVANIA CASTANELLA Dall, 1886.
Proc. U. S. Nat. Mus., vol. 9, p. 307, pl. 3, fig. 5.
Kyska to Atka Island, Aleutians.

ALVANIA AURIVILLII Dall, 1886.
Proc. U. S. Nat. Mus., vol. 9, p. 308, pl. 4, fig. 8.
Kyska to Adakh Island, Aleutians.

ALVANIA BAKERI Bartsch, 1910.
Nautilus, vol. 23, No. 11, p. 137, pl. 11, fig. 8.
Port Graham, Cook's Inlet, Alaska.

ALVANIA TRACHISMA Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 41, p. 339, pl. 29, fig. 7.
Monterey, California.

ALVANIA CALIFORNICA Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 41, p. 340, pl. 29, fig. 9.
Monterey, California.

ALVANIA CARPENTERI Weinkauff, 1885.
Conch. Cab., ed. 2 p. 192; Proc. U. S. Nat. Mus., vol. 41, pl. 29, fig. 8.
Forrester Island, Alaska, to Neah Bay, Washington.

Alvania burrardensis Bartsch, 1921,
Proc. Biol. Soc. Wash., vol. 34, p. 38.
Burrard Inlet, B. C.

ALVANIA PEDROANA Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 41, p. 341, pl. 29, fig. 4.
San Pedro, California. Pleistocene.

ALVANIA FILOSA Carpenter, 1865.
Ann. Mag. Nat. Hist., ser. 3, vol. 15, p. 28; Proc. U. S. Nat. Mus., vol. 41, pl. 30, fig. 7.
Neah Bay, Washington. Nanaimo and Victoria (Taylor).

ALVANIA ALASKANA Dall, 1886.
Proc. U. S. Nat. Mus., vol. 9, p. 307, pl. 4, fig. 9.
Nunivak Island, Bering Sea.

ALVANIA SANJUANENSIS Bartsch, 1921.
Proc. ~~U. S. Nat. Mus.~~ Biol. Soc. Wash. vol. 34, p. 37.
San Juan Islands, Gulf of Georgia.

ALVANIA MONTEREYENSIS Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 41, p. 343, pl. 30, fig. 2.
Sitka, Alaska, to Monterey, California.

ALVANIA ROSANA Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 41, p. 349, pl. 31, fig. 6.
Santa Rosa and Santa Catalina Islands, California.

ALVANIA ILIULIUKENSIS Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 41, p. 350, pl. 31, fig. 2.
Iliuliuk Harbor, Unalaska, to Belkoffski, Alaska.

ALVANIA COMPACTA Carpenter, 1865.
Proc. Acad. Nat. Sci. Phila., p. 62; Proc. U. S. Nat. Mus., vol. 41, p. 351, pl. 31, fig. 7.
Port Etches, Alaska, to Trinidad, California. San Martin Id. L. Cal. Baker.

ALVANIA ACUTILIRATA Carpenter, 1866.
Proc. Cal. Acad. Sci., vol. 3, p. 217; Proc. U. S. Nat. Mus., vol. 41, pl. 31, fig. 3.
San Diego, California. San Martin Id. L. Cal. Baker.

ALVANIA DINORA Bartsch, 1917.
Proc. U. S. Nat. Mus., vol. 52, p. 678, pl. 46, fig. 5.
Forrester Island, Alaska.

ALVANIA KYSKAËNSIS Bartsch, 1917.
Proc. U. S. Nat. Mus., vol. 52, p. 677, pl. 46, fig. 6.
Kyska Harbor, Aleutian Islands.

ALVANIA COSMIA Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 41, p. 352, pl. 31, fig. 4.
San Pedro, California, to San Martin Island, to Lower California.

ALVANIA PURPUREA Dall, 1871.
Amer. Journ. Conch., vol. 7, p. 116; Proc. U. S. Nat. Mus., vol. 41, pl. 31, fig. 1.
Monterey, California, to San Martin Island, Lower California.

ALVANIA AEQUISCULPTA Keep, 1887.
West Coast Shells, p. 65; Proc. U. S. Nat. Mus., vol. 41, p. 358, pl. 32, fig. 7.
Catalina Island to Todos Santos Bay. San Martin Id. L. Cal. Baker

ALVANIA ALMO Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 41, p. 359, pl. 32, fig. 1.
Santa Barbara Island, California.

ALVANIA OLDROYDAE Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 41, p. 361, pl. 32, fig. 2.
San Pedro, California, to South Coronado Island.

Family RISSOINIDAE.

Genus RISSOINA Orbigny, 1840.

RISSOINA KELSEYI Dall and Bartsch, 1902.
Nautilus, vol. 16, p. 94; Proc. U. S. Nat. Mus., vol. 49, p. 49, pl. 30, fig. 4.
San Pedro, California, to the Coronado Islands.

RISSOINA CALIFORNICA Bartsch, 1915.
Proc. U. S Nat. Mus., vol. 49, p. 55, pl. 33, fig. 1.
Catalina Island to South Coronado Island.

RISSOINA BAKERI Bartsch, 1902.
Nautilus, vol. 16, p. 9; Proc. U. S. Nat. Mus., vol. 49, p. 56, pl. 33, fig. 4.
San Pedro, California, to Coronado Islands. Monterey fide Berry.

RISSOINA NEWCOMBEI Dall, 1897.
Bull. Nat. Hist. Soc. Brit. Columbia, No. 2, p. 14, pl. 1, fig. 12.
Forrester Island, Alaska, to Vancouver Island.

RISSOINA CLEO Bartsch, 1915.
Proc. U. S. Nat. Mus., vol. 49, p. 58, pl. 33, fig. 3.
South Coronado Island.

RISSOINA DALLI Bartsch, 1915.
Proc. U. S. Nat. Mus., vol. 49, p. 59, pl. 33, fig. 2.
San Pedro, California, to South Coronado Island.

RISSOINA CORONADOËNSIS Bartsch, 1915.
Proc. U. S. Nat. Mus., vol. 49, p. 60, pl. 33, fig. 8.
San Diego, California, to San Martin Island, Lower California.

Family ANAPLOCAMIDAE.

Genus ANAPLOCAMUS Dall, 1895.

ANAPLOCAMUS BOREALIS Dall, 1895.
Proc. U. S. Nat. Mus., vol. 24, p. 550, pl. 38, fig. 4.
South of Unimak Island, Alaska, in 61 fathoms. (U. S. Bureau of Fisheries).

Family TRUNCATELLIDAE.

Genus TRUNCATELLA (Leach, 1818) Risso, 1826.

TRUNCATELLA CALIFORNICA Pfeiffer, 1857.
Proc. Zool. Soc., p. 111.—Binney, Terr. Moll., vol. 4, pl. 79, figs. 20, 22.
Santa Barbara to San Diego and San Martin Island, Lower California.

TRUNCATELLA STIMPSONI Stearns, 1872.
Proc. Cal. Acad. Sci., vol. 4, p. 248, pl. 1, fig. 5.
Catalina Island, California, to Magdalena Bay, Lower California.

Family SYNCERATIDAE.

Genus SYNCERA Gray, 1821.

SYNCERA TRANSLUCENS Carpenter, 1864.
Suppl. Rep. Brit. Assoc., 1863, pp. 613, 657; Proc. Cal. Acad. Sci., vol. 3, p. 219.
Vancouver Island to Lower California.

Family CAPULIDAE.

Genus CAPULUS Montfort, 1810.

CAPULUS CALIFORNICUS Dall, 1900. **(Plate 15, fig. 6.)**
Nautilus, vol. 13, No. 9, p. 100.
San Pedro to San Diego, on Pectens.

Genus PILISCUS Lovèn, 1859.

PILISCUS COMMODUS Middendorff, 1851.
Sibirische Reise, vol. 2, p. 214, pl. 17, figs. 4–11.
Arctic Ocean to Pribilof Islands, Bering Sea, and the Okhotsk Sea.

Family HIPPONICIDAE.

Genus HIPPONIX Defrance, 1819.

HIPPONIX BARBATUS Sowerby, 1835.
Proc. Zool. Soc., p. 5.—Tryon, Man., vol. 8, pl. 40, figs. 2–3.
Crescent City, California, to Panama and the Galapagos Islands.

HIPPONIX SERRATUS Carpenter, 1857.
Mazatlan Cat., p. 296.—Tryon, Man., vol. 8, pl. 100, fig. 40.
Monterey, California, to Panama.

HIPPONIX ANTIQUATUS Linnaeus, 1767.
Syst. Nat., ed. 12, p. 1259.—Tryon, Man., vol. 8, pl. 40, figs. 93–97.
Crescent City, California, to Panama and the Galapagos Islands. Peru.

HIPPONIX ANTIQUATUS CRANIOIDES Carpenter, 1864.
Ann. Mag. Nat. Hist., ser. 3, vol. 14, p. 427.—Tryon, Man., vol. 8, pl. 40, fig. 6.
Vancouver Island to San Pedro, California.

HIPPONIX TUMENS Carpenter, 1865.
Ann. Mag. Nat. Hist., ser. 3, vol. 15, p. 180.—Tryon, Man., vol. 8, pl. 40, fig. 7.
Crescent City, California, to San Diego. San Martin Id. L. Cal. Baker.

Family CREPIDULIDAE.

Genus CREPIDULA Lamarck, 1801.

Section CREPIDULA s. s.

CREPIDULA GRANDIS Middendorff, 1849.
Mal. Rossica, p. 101.—Tryon, Man., vol. 8, pl. 37, fig. 33.
Cape Franklin, Arctic Ocean, south and east to Sitka, Alaska. Also Kamchatka.

CREPIDULA ONYX Sowerby, 1825.
Genera of Shells, No. 23, fig. 2.
Monterey, California, to Panama. Chile.

CREPIDULA NORRISIARUM Williamson, 1905.
Nautilus, vol. 19, No. 5, p. 51.
San Pedro, on *Norrisia* only. San Diego, Kelsey.

CREPIDULA EXCAVATA Broderip, 1834.
Proc. Zool. Soc., p. 46; Trans., vol. 1, p. 205, pl. 29, fig. 7.
Monterey, California, to Payta, Peru.

CREPIDULA EXCAVATA NATICARUM Williamson, 1905.
Nautilus, vol. 19, No. 5, p. 50.
San Pedro, on *Natica*.

CREPIDULA INCURVA Broderip, 1834.
Proc. Zool. Soc., p. 40; Trans., vol. 1, p. 204, pl. 29, fig. 6.
San Pedro, California, to Panama. Peru.

CREPIDULA ORBICULATA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 351.
Bering Sea to San Diego, California.

CREPIDULA CONVEXA GLAUCA Say, 1822.
Journ. Acad. Nat. Sci. Phila., vol. 2, p. 226.—Tryon, Man., vol. 8, pl. 36, fig. 9.
Alameda, California. Introduced with Atlantic seed oysters.

CREPIDULA ADUNCA Sowerby, 1825.
Tankerville Cat. App., p. vii, No. 828.—Keep, West Coast Shells, p. 207, fig. 201.
Vancouver Island to Cape San Lucas.

CREPIDULA ACULEATA Gmelin, 1792.
Syst. Nat., vol. 7, p. 3693.—Tryon, Man., vol. 8, pl. 39, figs. 61–63.
Santa Barbara, California, to Valparaiso, Chile.

Subgenus CREPIPATELLA Lesson, 1830.

CREPIPATELLA LINGULATA Gould, 1846.
Proc. Boston Soc. Nat. Hist., vol. 2, p. 160; Rep. U. S. Expl. Exp., Moll., figs. 481 *a–c*.
Bering Sea to Panama.

Cayucos, near Morro, Cal. Chace

(1) Crucibulum imbricatum Sowerby, 1824.
Genera of Shells, Calyptraea, fig. 5. Trans.
Zool. Soc. I, p. 193, pl. 27, fig. 7.
La Jolla, Cal. (Orcutt). to Peru.

Subgenus Ianacus Mörch, 1852.

IANACUS NUMMARIUS Gould, 1846.
Proc. Boston Soc. Nat. Hist., vol. 2, p. 160; Rep. U. S. Expl. Exp., Moll., figs. 480 *a–b*.
Plover Bay, Bering Strait, to Mazatlan.

IANACUS NUMMARIUS FIMBRIATUS Reeve, 1859.
Conch. Icon., *Crepidula*, fig. 11.
Vancouver Island to Gulf of California.

IANACUS NUMMARIUS PERFORANS Valenciennes, 1846.
Voy. *Venus*, Atlas, pl. 24, fig. 9.
Monterey, California, to Panama, in *Pholas* borings.

IANACUS NUMMARIUS GLOTTIDIARUM Dall, 1905.
Nautilus, vol. 19, No. 3, p. 26.
San Pedro, California, on *Glottidia albida* only.

Family CALYPTRAEIDAE.

Genus CRUCIBULUM Schumacher, 1817.

CRUCIBULUM SPINOSUM Sowerby, 1824.
Genera of Shells, *Calyptraea*, figs. 4, 7.
Trinidad, California, to Tome, Chile, and the Galapagos Islands.

Genus CALYPTRAEA Lamarck, 1799.

CALYPTRAEA FASTIGIATA Gould, 1846.
Proc. Boston Soc. Nat. Hist., vol. 2, p. 161; Rep. U. S. Expl. Exp., Moll., figs. 484 *a–b*.
Port Etches, Alaska, to Puget Sound.

CALYPTRAEA CONTORTA Carpenter, 1865.
Proc. Cal. Acad. Sci., vol. 3, p. 215.
Catalina Island, California, to Gulf of California.

NATICACEA.

Family NATICIDAE.

Genus NATICA Scopoli, 1777.

Subgenus Cryptonatica Dall, 1892.

CRYTONATICA CLAUSA Broderip and Sowerby, 1829. (Plate 14, fig. 11.) P/
Zool. Journ., vol. 4, p. 372.—Tryon, Man., vol. 8, pl. 9, fig. 65.
Arctic and Bering Seas, south, in gradually deepening water, to Japan on the west and San Diego, California, on the east.

CRYPTONATICA RUSSA Gould, 1859.
Proc. Boston Soc. Nat. Hist., vol. 7, p. 43.
Bering Strait to Forrester Island, Alaska.

CRYPTONATICA AFFINIS Gmelin, 1792.

Syst. Nat., vol. 7, p. 3675.—Sars, Moll. Reg. Arct. Norv., pl. 21, fig. 14.

Arctic Ocean north of Bering Strait. Also Greenland.

CRYPTONATICA JANTHOSTOMA Deshayes, 1841. (Plate 14, fig. 12.)

Guérin, Mag. de Zool., Moll., pl. 45.

Commander Islands, Bering Sea; Kamchatka and south to Japan.

CRYPTONATICA ALEUTICA Dall, 1919. (Plate 14, fig. 10.)

Proc. U. S. Nat. Mus., vol. 56, p. 352; Proc. Biol. Soc. Wash., vol. 32, p. 251.

North end of Nunivak Island, Bering Sea; south on the west from Kamchatka to Japan; on the east to the Aleutian chain and Puget Sound.

CRYPTONATICA SALIMBA Dall, 1919.

Proc. U. S. Nat. Mus., vol. 56, p. 351.

Off Esteros Bay, California, and south to the Gulf of California, in deep water.

Genus POLINICES Montfort, 1810.

Subgenus Euspira Agassiz, 1842.

EUSPIRA PALLIDA Broderip and Sowerby, 1829. (Plate 14, fig. 5.)

Zool. Journ., vol. 5, pt. 4, p. 372.—Tryon, Man., vol. 8, pl. 14, fig. 26.

Arctic Ocean at Point Barrow and southward on the east to Forrester Island, Alaska. On the west at the island of Kolguief in the Polar Sea and in the Okhotsk Sea (Middendorff).

EUSPIRA GRÖNLANDICA (Beck) Moller, 1842.

Ind. Moll. Grönl., p. 7.—Sars, Moll. Reg. Arct. Norv., pl. 21, fig. 15.

Arctic Seas southward in gradually deeper water to Monterey, California. Also Greenland.

EUSPIRA ACOSMITA Dall, 1919.

Proc. U. S. Nat. Mus., vol. 56, p. 352. Monterey, 627 fms.

San Clemente Island, California, to the Coronado Islands, in deep water.

EUSPIRA MONTERONA Dall, 1919.

Proc. U. S. Nat. Mus., vol. 56, p. 352.

Arctic Ocean, Bering Sea, and the Aleutians. Prince Wm. Sound.

EUSPIRA ALGIDA Gould, 1848?

Proc. Boston Soc. Nat. Hist., vol. 3, p. 73; Rep. U. S. Expl. Exp., Moll., fig. 256.

Coal Harbor, Shumagin Islands, Alaska to Puget Sound. "Rio Negro" (Gould).

EUSPIRA POLITIANA Dall, 1919.

Proc. U. S. Nat. Mus., vol. 56, p. 353.

Petrel Bank, Bering Sea.

EUSPIRA CAURINA Gould, 1847.

Proc. Boston Soc. Nat. Hist., vol. 2, p. 239; Rep. U. S. Expl. Exp., Moll., fig. 254.

Norton Sound, Alaska, to Puget Sound, and in deep water (822 fathoms) to San Diego, California.

EUSPIRA CANONICA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 353.
Off Alaska Peninsula in 1,365 fathoms, and off San Diego, California, in 822 fathoms.

EUSPIRA LEWISII Gould, 1847.
Proc. Boston Soc. Nat. Hist., vol. 2, p. 239; Rep. U. S. Expl. Exp., Moll., fig. 253.
Duncan Bay, British Columbia, to the Santa Barbara Islands, California.
San Diego, Baker (?)

EUSPIRA DRACONIS Dall, 1903. (Plate 14, figs. 4, 6.)
Proc. Biol. Soc. Wash., vol. 16, p. 174.
Port Althorp, Alaska, to Catalina Island, California.

Subgenus NEVERITA Risso, 1826.

NEVERITA RECLUZIANA Deshayes, 1841.
GUÉRIN, Mag. de Zool., Moll., pl. 37.
Crescent City, California, to the Tres Marias Islands. Chile (Philippi).

NEVERITA RECLUZIANA IMPERFORATA Dall, 1909.
U. S. Geol. Surv., Prof. Paper 59, p. 88.
Crescent City to San Diego, California.

NEVERITA RECLUZIANA ALTA Dall, 1909.
U. S. Geol. Surv., Prof. Paper 59, p. 88.
Monterey to Catalina Island, California. San Diego, Baker, Fossil, S. Cedr

Subgenus POLINICES s. s.

POLINICES NANUS Moller, 1842.
Index Moll. Grönl., p. 7.—SARS, Moll. Reg. Arct. Norv., pl. 21, fig. 16.
Arctic Ocean to the Aleutians and southward in gradually deeper water to near San Diego, California (640 fathoms). Also Greenland.

Genus SINUM Bolten, 1798.

SINUM CALIFORNICUM Oldroyd, 1917.
Nautilus, vol. 31, No. 1, p. 13.
Monterey, California, to Todos Santos Bay, Lower California.

SINUM DEBILE Gould, 1852.
Proc. Boston Soc. Nat. Hist., vol. 6, p. 395.—TRYON, Man., vol. ~~7~~, pl. 24, fig. 65. 8/
Catalina Island, California, to Gulf of California.

SINUM PAZIANUM Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 354.
Catalina Island, California, to Panama.

SINUM KERATIUM Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 354.
Catalina Island, California.

Genus EUNATICINA Fischer, 1855.

EUNATICINA OLDROYDII Dall, 1897. (Plate 14, figs. 1, 3.)
Nautilus, vol. 11, No. 8, p. 85; vol. 13, No. 8, p. 85, 1899.
Oregon to San Diego, California.

Genus ELACHISINA Dall, 1918.

ELACHISINA GRIPPI Dall, 1918.

Proc. Biol. Soc. Wash., vol. 31, p. 137; Proc. U. S. Nat. Mus., vol. 56, p. 354, 1919.

Off San Diego, California, in 16 to 20 fathoms.

Genus BULBUS Brown, 1839.

BULBUS FRAGILIS (Leach, 1819) APERTUS (Lovèn) Middendorff, 1851.

Journ. de Phys., vol. 88, p. 464; Midd., Sibirische Reise, pl. 11, figs. 1–3.

Icy Cape, Arctic Ocean, south to the Aleutian Islands and eastward to the Shumagin Islands.

Genus AMAUROPSIS Mörch, 1857.

AMAUROPSIS PURPUREA Dall, 1871.

Amer. Journ. Conch., vol. 7, p. 124, pl. 15, fig. 16; Proc. U. S. Nat. Mus., vol. 24, pl. 38, fig. 9 (? Zool. Beechey's Voy., pl. 37, fig. 4, 1839).

Arctic coast westward from Bernard Harbor, to Point Barrow and south to Plover Bay and Nunivak Island, Bering Sea.

NARICACAE?

Family VANICOROIDAE?

Genus MEGALOMPHALUS Brusina, 1871.

MEGALOMPHALUS CALIFORNICUS Dall, 1903. **(Plate 14, fig. 7.)**

Proc. Biol. Soc. Wash., vol. 16, p. 175.

Santa Barbara Islands, California.

MARSENIACEA

Family LAMELLARIIDAE.

Genus LAMELLARIA Montagu, 1815.

LAMELLARIA STEARNSII Dall, 1871.

Amer. Journ. Conch., vol. 7, pt. 2, p. 122, pl. 15, fig. 6.

Puget Sound to Monterey, California. San Pedro.

LAMELLARIA STEARNSII ORBICULATA Dall, 1871.

Amer. Journ. Conch., vol. 7, pt. 2, p. 122, pl. 15, figs. 2, 3.

Sannakh Islands, Alaska, to Gulf of California.

LAMELLARIA DIEGOËNSIS Dall, 1885.

Proc. U. S. Nat. Mus., vol. 8, p. 538, pl. 24, figs. 1, 2, 3.

San Pedro and the islands to San Diego, California.

LAMELLARIA DIGUETI Rochebrune, 1895.

Mus. d'Hist. Nat., Paris, Bull. 1, p. 240.

San Pedro, California, to Gulf of California.

? Velutina rubra Willett, Nautilus, vol. 33, p. 25, July, 1919.
Forrester Id.

Section MARSENINA Gray, 1850.

LAMELLARIA RHOMBICA Dall, 1871.
Amer. Journ. Conch., vol. 7, pt. 2, p. 122, pl. 15, figs. 4, 5.
Neah Bay, Washington, to Magdalena Bay, Lower California.

Genus ONCHIDIOPSIS Bergh, 1853.

ONCHIDIOPSIS HANNAI Dall, 1916.
Proc. Acad. Nat. Sci. Phila., p. 376.
St. Paul Island, Pribilof group, Bering Sea.

Family VELUTINIDAE.

Genus VELUTINA Fleming, 1822.

VELUTINA PROLONGATA Carpenter, 186~~5~~. 4/
Ann. Mag. Nat. Hist., ser. 3, vol. 15, p. 32.
Bering Strait to Monterey, California.

VELUTINA ZONATA Gould, 1841.
Invert. Mass., p. 242, fig. 160.
Icy Cape, Arctic Ocean, to Monterey, California; also Atlantic.

VELUTINA LAEVIGATA (Linnaeus) Müller, 1776.
Syst. Nat., ed. 12, p. 1250; Zool. Danica, pl. 101, figs. 1–4.
Icy Cape, Arctic Ocean, to Monterey, California; also Atlantic.

VELUTINA CONICA Dall, 1886.
Proc. U. S. Nat. Mus., vol. 9, p. 305, pl. 3, fig. 10.
Aleutian Islands eastward to Kodiak and south to Forrester Island, Alaska.

VELUTINA GRANULATA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 355.
Monterey, California, in 55 fathoms.

VELUTINA CORIACEA Pallas, 1788.
Nov. Acta Acad. Petrop., vol. 2, p. 237.—TRYON, Man., vol. 8, pl. 28, figs. 49, 50.
Bering Sea, and the Okhotsk Sea.

VELUTINA CRYPTOSPIRA Middendorff, 1849.
Mal. Rossica, pt. 2, p. 106; Sibirische Reise, pl. 25, figs. 8, 9, 10.
Gulf of Alaska. Also Kamchatka, Kronotski Gulf.

VELUTINA SITKENSIS A. Adams, 1851.
Proc. Zool. Soc., p. 2~~83~~. 25/
Bering Sea; Sitka, Alaska (Adams).

Genus TORELLIA Lovèn, 1867.

TORELLIA AMMONIA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 355.
Southwest of Sannakh Island, Alaska, in 41 fathoms.

TORELLIA VALLONIA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 355.
Nazan Bay, Atka Island, Aleutians.

Superfamily DOCOGLOSSA.

Family LEPETIDAE.

Genus LEPETA Gray, 1847.

Subgenus Cryptoctenidia Dall, 1918.

CRYPTOCTENIDIA CONCENTRICA Middendorff, 1851.
Sibirische Reise, p. 183, pl. 16, fig. 6; Amer. Journ. Conch., vol. 5, pt. 3, pl. 15, fig. 2.
Icy Cape, Arctic Ocean, on the west to the Okhotsk Sea and Shantar Islands. on the east to Forrester Island, Alaska.

4/ **CRYPTOCTENIDIA CAECOIDES Carpenter, 186~~5~~.**
Proc. Acad. Nat. Sci. Phila., p. 60.
Arctic and Bering Seas to Hakodate, Japan, the Aleutian Islands, and south to the Farallones Islands, California.

CRYPTOCTENIDIA ALBA Dall, 1869.
Amer. Journ. Conch., vol. 5, pt. 3, p. 145, pl. 15, figs. 3 *a–d*.
Bering Strait and sea south to Fuca Strait.

CRYPTOCTENIDIA ALBA INSTABILIS Dall, 1869.
Amer. Journ. Conch., vol. 5, pt. 3, p. 145, pl. 15, fig. 6.
Unalashka to the Shumagins and south to Sitka Sound, Alaska.

Family ACMAEIDAE.

Genus ACMAEA Eschscholtz, 1830.

(See Nautilus, June, 1914.)

ACMAEA MITRA Eschscholtz, 1833.
Zool. Atlas, p. 18, pl. 23, fig. 4; Amer. Journ. Conch., vol. 5, pl. 15, figs. 5 *a–c*.
Pribilof Islands, Bering Sea, to San Diego, California.

ACMAEA MITRA FUNICULATA Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 650.
Shumagin Islands, Alaska, to Magdalena Bay, Lower California.

Section COLLISELLA Dall, 1871.

ACMAEA CASSIS Eschscholtz, 1833.
Zool. Atlas, p. 19, pl. 24, fig. 3.
Aleutian Islands to San Francisco, California.

ACMAEA CASSIS PELTA Eschscholtz, 1833.
Zool. Atlas, p. 10.—Tryon, Man., vol. 13, pl. 8, figs. 90, 91.
Okhotsk and Southern Bering Sea, Nushagak, Alaska, the Aleutian Islands south to Rosario Bay, Lower California, and Socorro Island.

ACMAEA CASSIS OLYMPICA Dall, 1914.
Nautilus, vol. 28, No. 2, p. 14.—Tryon, Man., vol. 13, pl. 8. figs. 92–94.
Alaska Peninsula south to San Diego, California.

Acmaea atrata Cpr. 1864.
Ann. Mag. N. Hist. 3rd Ser. XIII, p. 474, June. Pilsbry in
Tryon Man. XIII, p. 29, pl. 7, f. 61-65, 1891.
Santa Monica & San Pedro, Griggs; C. S. Lucas Cpr.

ACMAEA CASSIS NACELLOIDES Dall, 1871.
Amer. Journ. Conch., vol. 6, p. 247, pl. 17, figs. 36 *a–c*.
Attu Island, Aleutians, east and south to San Diego, California, on kelp.

ACMAEA CASSIS MONTICOLA Carpenter, 1866.
Amer. Journ, Conch., vol. 2, p. 337.
Monterey, California.

ACMAEA SCUTUM Eschscholtz, 1833.
Zool. Atlas, pt. 5, p. 19, pl. 23, figs. 1–3.
Southern Bering Sea to Tugur Bay and the Shantar Islands on the west, and from the Pribilof and Aleutian Islands on the east south to the Gulf of California and Socorro Island.

ACMAEA SCUTUM PATINA Eschscholtz, 1833.
Zool. Atlas, pt. 5, p. 19, pl. 24, figs. 7, 8.
Same distribution as the typical form.

ACMAEA SCUTUM PINTADINA Gould, 1846.
Proc. Boston Soc. Nat. Hist., vol. 2, p. 151.—Tryon, Man., vol. 13, pl. 9, fig. 6.
Aleutian Islands to Monterey, California.

ACMAEA SCUTUM CRIBRARIA Carpenter, 1866.
Amer. Journ. Conch., vol. 2, p. 335.
Neah Bay, Washington, to Santa Barbara, California.

ACMAEA SCUTUM OCHRACEA Dall, 1871.
Amer. Journ. Conch., vol 6, p. 249, pl. 17, fig. 35.
Monterey, California.

ACMAEA SCUTUM PARALLELA Dall, 1914.
Nautilus, vol. 28, No. 2, p. 14; Amer. Journ., Conch., vol. 6, p. 250, pl. 14. fig. 13.
Sitka, Alaska, to Victoria, British Columbia, on eel grass.

ACMAEA EMYDIA Dall, 1914.
Nautilus, vol. 28, No. 2, p. 14; Amer. Journ. Conch., vol. 6, p. 250, ex parte.
Arctic Ocean and Northern Bering Sea to Nushagak, Alaska, the Pribilof Islands, and Attu Island.

ACMAEA PERAMABILIS Dall, 1872.
Proc. Cal. Acad. Sci., vol. 4, p. 302.—Tryon, Man., vol. 13, pl. 33, figs. 80–82.
Shumagin Islands, Alaska, on granite rocks only. Prince Wm Sound, 40 fms. Eyerdam.

ACMAEA DIGITALIS Eschscholtz, 1833.
Zool. Atlas, vol. 5, p. 20, pl. 23, figs. 7, 8.
Aleutian Islands to Monterey, California.

ACMAEA DIGITALIS UMBONATA Reeve, 1855.
Conch. Icon., *Patella*, fig. 107.
Saginaw Bay, Alaska.

ACMAEA DIGITALIS TEXTILIS Gould, 1846.
Proc. Boston Soc. Nat. Hist., vol. 2, p. 152; Rep. U. S. Expl. Exp., Moll., pl. 29, fig. 456.
Tillamook, Oregon, south to Socorro Island.

ACMAEA LIMATULA Carpenter, 1866.

Amer. Journ. Conch., vol. 6, p. 340.—Tryon, Man., vol. 13, p. 14, pl. 3, figs. 38–40.

Crescent City, California, to Cerros and Socorro Islands.

ACMAEA LIMATULA MÖRCHII Dall, 1878.

Proc. U. S. Nat. Mus., vol. 1, p. 47.—Tryon, Man., vol. 13, pl. 3, figs. 47–49.

Tomales Bay, California.

ACMAEA SCABRA Gould, 1846.

Proc. Boston Soc. Nat. Hist., vol. 2, p. 152.—Tryon, Man., vol. 13, pl. 1, figs. 7, 9.

San Francisco, California, to Socorro Island.

ACMAEA SYBARITICA Dall, 1871.

Amer. Journ. Conch., vol. 6, p. 257, pl. 17, fig. 34.—Tryon, Man., vol. 13, pl. 9, figs. 22–24.

Plover Bay, Eastern Siberia, to Hakodate, Japan, on the west; on the east from the Pribilof and Aleutian Islands, to Chirikoff Island.

ACMAEA APICINA Dall, 1879. not of Gray.

Proc. U. S. Nat. Mus., vol. 1, p. 403.—Tryon, Man., vol. 13, pl. 7, figs. 66, 67.

Pribilof, Aleutian, and Shumagin Islands, Alaska.

ACMAEA PERSONA Eschscholtz, 1833.

Zool. Atlas., vol. 5, p. 20, pl. 24, figs. 1, 2.

Shumagin Islands, Alaska, to Socorro Island.

ACMAEA PERSONA STRIGILLATA Carpenter, 1866.

Suppl. Rep. Brit. Assoc., p. 618; Amer. Journ. Conch., vol. 2, p. 337.

Sitka, Alaska, to Magdalena Bay, Lower California.

ACMAEA ROSACEA Carpenter, 1866.

Amer. Journ. Conch., vol. 2, p. 341.—Tryon, Man., vol. 13, pl. 7, figs. 71–73.

Neah Bay, Washington, to Acapulco, Mexico.

ACMAEA INSTABILIS Gould, 1846.

Proc. Boston Soc. Nat. Hist., vol. 2, p. 150.—Tryon, Man. vol. 13, pl. 6, figs. 32, 33.

Kodiak Island to San Pedro, on kelp stalks. San Diego.

ACMAEA INSESSA Hinds, 1842.

Ann. Mag. Nat. Hist., vol. 10, p. 82, pl. 6, fig. 3.—Tryon, Man., vol. 13, pl. 6, figs. 36, 37.

Trinidad, California, to Magdalena Bay, Lower California, on kelp.

ACMAEA ASMI Middendorff, 1849.

Mal. Rossica, vol. 2, p. 39, pl. 1, fig. 5.—Tryon, Man., vol. 13, pl. 6, figs. 38, 39.

Sitka, Alaska, to San Diego, California, and Socorro Island, on black Tegulas.

ACMAEA DEPICTA Hinds, 1842.

Ann. Mag. Nat. Hist., vol. 10, p. 82, pl. 6, fig. 4.—Tryon, Man., vol. 13, pl. 6, figs. 40, 41.

Santa Barbara to Lower California, on *Zostera*. S. Hippolito Pt, H. coll.

Newport, Oregon. Ey adams

Not Patella (= Acmaea) apicina Gray, 1857, from S. Africa. New name A. aleutica Dall, 1926

ACMAEA PALEACEA Gould, 1851.
Mex. and Cal. Shells, p. 3, pl. 14, fig. 5.—Tryon, Man., vol. 13, p. 6, fig. 42.
Trinidad to Lower California on *Zostera*.

ACMAEA TRIANGULARIS Carpenter, 1866. Suppl. Rep. B. A. p. 650. 4/
Pal. Cal. Acad. Sci., vol. 3, p. 213.—Tryon, Man., vol. 13, pl. 7, figs. 74–78.
Sitka, Alaska, to the Gulf of California, on sea grasses.

Section RHODOPETALA Dall, 1920.

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? ACMAEA ROSEA Dall, 1872.
Proc. Cal. Acad. Sci., vol. 4, p. 270, pl. 1, fig. 2.
Kyska Island, Aleutians, to the Shumagin Islands, Alaska.

Genus LOTTIA Gray, 1834.

LOTTIA GIGANTEA Gray, 1834.
Sowerby, Genera of Shells, *Lottia*, fig. 1.—Tryon, Man., vol. 13, pl. 38.
Crescent City, California, south to Guadelupe and Cerros Islands.

LOTTIA GIGANTEA ALBOMACULATA Dall, 1910.
Nautilus, vol. 24, No. 8, p. 96.
Crescent City, California, to Rosario Bay, Lower California.

Superfamily RHIPIDOGLOSSA.

Family COCCULINIDAE.

Genus COCCULINA Dall, 1881.

COCCULINA AGASSIZII Dall, 1908.
Bull. Mus. Comp. Zool., vol. 43, No. 6, p. 340.
Off Queen Charlotte Islands, British Columbia, 145 fathoms. Gulf of Panama, 556 fathoms.

COCCULINA CAZANICA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 356.
Kasaän Bay and Stephens Passage, Alaska, 95 to 160 fathoms.

Family PHASIANELLIDAE.

Genus PHASIANELLA Lamarck, 1804.

Subgenus Tricolia Risso, 1826.

TRICOLIA COMPTA Gould, 1855.
H. Reps. Doc. 129, Prelim. Rep., p. 25; Pacific R. R. Reps., vol. 5, pl. 11, figs. 25, 26.—Tryon, Man., vol. 10, pl. 39, figs. 69–72.
Monterey to Gulf of California. [illegible]

TRICOLIA COMPTA PUNCTULATA Carpenter, 1865. 4/
Ann. Mag. Nat. Hist., vol. 15, p. 179. Suppl. Rep. B. A. p. 651.
San Diego, California, to Cape San Lucas, Lower California.

TRICOLIA COMPTA PRODUCTA Dall, 1908.
Proc. U. S. Nat. Mus., vol. 34, p. 256.—Tryon, Man., vol. 10, p. 173, pl. 39, fig. 69.
San Pedro, California.

TRICOLIA PULLOIDEA Carpenter, 1865.
Ann. Mag. Nat. Hist., ser. 3, vol. 15, p. 180.
Monterey, California, to Lower California.

TRICOLIA PULLOIDEA ELATIOR Carpenter, 1865.
Ann. Mag. Nat. Hist., ser. 3, vol. 15, p. 180.
Monterey to San Diego, California. Fossil, San Pedro.

Subgenus Eulithidium Pilsbry, 1898.

EULITHIDIUM TYPICUM Dall, 1908.
Proc. U. S. Nat. Mus., vol. 34, p. 255.
San Luis Obispo, California, to Cape San Lucas. Monterey? Berry.

EULITHIDIUM SUBSTRIATUM Carpenter, 1864.
Ann. Mag. Nat. Hist., vol. 13, p. 475.
Catalina Island, California, to Panama.

EULITHIDIUM LURIDUM Dall, 1897.
Bull. Nat. Hist. Soc. Brit. Col., No. 2, p. 15, pl. 1, fig. 11.
Vancouver Island to Mendocino County, California.

Family TURBINIDAE.

Genus ASTRAEA Bolten, 1798.

Subgenus Pomaulax Gray, 1850.

POMAULAX UNDOSUS Wood, 1828.
Index Test. Suppl., p. 16, pl. 5, *Trochus*, fig. 1.
Laguna Beach, California, to Cerros Island, Lower California.

Subgenus Pachypoma Gray, 1850.

PACHYPOMA INAEQUALE Martyn, 1784.
Figs. Nondescript Shells, tab. 1, pl. 31.
Vancouver Island, British Columbia, to San Pedro and the Santa Barbara Islands, California. San Diego, Baker.

PACHYPOMA INAEQUALE PACIFICUM Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 356.
Pacific Beach, San Diego County, California. Monterey. Lower San Pedro Pleistocene.

PACHYPOMA BARBARENSE Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 357.
Off Santa Cruz Island, California, in 30 fathoms.

Genus LEPTOTHYRA (Carpenter) Pease, 1869.

LEPTOTHYRA CARPENTERI Pilsbry, 1888.
Tryon, Man., vol. 10, p. 247, pl. 39*a*, fig. 26; pl. 60, fig. 66.
Sitka Sound, Alaska, to San Diego, California. Coronado Ids. Baker

LEPTOTHYRA LURIDA Dall, 1885.
Proc. U. S. Nat. Mus., vol. 8, p. 542.—Tryon, Man., vol. 10, pl. 39*a*, figs. 27–29. ?
Puget Sound to Cape San Lucas.

LEPTOTHYRA BACULA Carpenter, 1864.
Proc. Cal. Acad. Sci., vol. 3, pp. 177, 188.—Tryon, Man., vol. 10, pl. 39*a*, fig. 33.
Puget Sound to San Martin Island, Lower California.

LEPTOTHYRA PAUCICOSTATA Dall, 1871.
Amer. Journ. Conch., vol. 7, p. 134, pl. 15, fig. 10.
Monterey to Coronado Islands. San Martin Id. L. Cal. Baker.

LEPTOTHYRA PAUCICOSTATA FENESTRATA Bartsch, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 358.
Monterey to Coronado Islands.

LEPTOTHYRA JUANENSIS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 358.
San Diego, California, to Tia Juana, Lower California.

LEPTOTHYRA GRIPPI Dall, 1911.
Nautilus, vol. 25, No. 3, p. 25.
San Diego, California, 100 to 150 fathoms.

Family LIOTIIDAE.

Genus LIOTIA Gray, 1847.

LIOTIA FENESTRATA Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 652; Proc. Cal. Acad. Sci., vol. 3, p. 158.—Tryon, Man., vol. 10, pl. 36, fig. 97.
Monterey to Catalina Island, California. San Martin Id. Baker.

LIOTIA ACUTICOSTATA Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 652; Proc. Cal. Acad. Sci., vol. 3, p. 158.—Tryon, Man., vol. 10, pl. 36, fig 1.
Catalina Island, California, to Magdalena Bay, Lower California. Monterey, Berry.

LIOTIA ACUTICOSTATA RADIATA Dall, 1919.
Proc. Biol. Soc. Wash., vol. 31, p. 8.
San Diego and Coronado Islands.

Subgenus Arene H. and A. Adams, 1854.

ARENE COOKEANA Dall, 1918.
Proc. Biol. Soc. Wash., vol. 31, p. 8.
South Coronado Island to Gulf of California.

Subgenus Cynisca H. and A. Adams, 1854.

CYNISCA FRICKI Crosse, 1865.
Journ. de Conchyl., vol. 13, p. 55.
"California" (Frick). ? West Indies.

Genus MOLLERIA Jeffreys, 1865.

MOLLERIA DRUSIANA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 358.
Amchitka Island to Glacier Bay, Alaska.

MOLLERIA QUADRAE Dall, 1897.
Bull. Nat. Hist. Soc. Brit., Col. No. 2, p. 15, pl. 1, fig. 14.
Amchitka Island, Aleutians, to Queen Charlotte Islands, British Columbia.

Family TROCHIDAE.

Genus NORRISIA Bayle, 1880.

NORRISIA NORRISII Sowerby, 1838.
Mag. Nat. Hist., new ser., vol. 2, p. 96.—Tryon, Man., vol. 11, pl. 61, fig. 80.
Monterey, California, to Cerros Island, Lower California.

Genus HALISTYLUS Dall, 1889.

HALISTYLUS SUBPUPOIDEUS Tryon, 1887.
Man., vol. 9, p. 394, pl. 60, fig. 77.
Queen Charlotte Islands, British Columbia, to Panama Bay.

Genus TEGULA Lesson, 1832.

Subgenus Chlorostoma Swainson, 1840.

CHLOROSTOMA FUNEBRALE A. Adams, 1854.
Proc. Zool. Soc., p. 316.—Tryon, Man., vol. 11, p. 170, pl. 28, figs. 42–44.
Vancouver Island to Cerros Island, Lower California.

CHLOROSTOMA FUNEBRALE SUBAPERTUM Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 652.
Neah Bay, Washington, and southward. San Diego. H. H.

CHLOROSTOMA GALLINA Forbes, 1850.
Proc. Zool. Soc., p. 271.—Tryon, Man., vol. 11, p. 20, fig. 5, pl. 28, figs. 52, 53.
San Francisco Bay to Gulf of California.

CHLOROSTOMA GALLINA MULTIFILOSUM Stearns, 1893.
Proc. U. S. Nat. Mus., vol. 16, p. 351, pl. 1, figs. 8, 9. Nautilus, Dec. 1892
San Pedro, California, to Guadelupe Island. Cocos Id. Panama p. 86.

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CHLOROSTOMA GALLINA TINCTUM (Hemphill) Pilsbry, 1893.
Tryon, Man., vol. 11, p. 109.
Halfmoon Bay, California, and south to San Diego and Socorro Island.

CHLOROSTOMA GALLINA UMBILICATUM Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 359.
Catalina Id. & San Diego, California, to San Quentin Bay, Lower California.

CHLOROSTOMA BRUNNEUM Philippi, 1848.
Zeitschr. für Mal., p. 189.—Tryon, Man., vol. 11, p. 170, pl. 27, figs. 36–38.
Mendocino County, California, to Santa Barbara Islands.

? Tegula impressa Jonas.
Pt. Vincent, Cal. W. O. Gregg.

CHLOROSTOMA BRUNNEUM FLUCTUOSUM Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 359.
Purissima to San Nicolas Island, California.

CHLOROSTOMA RUGOSUM A. Adams, 1851.
Proc. Zool. Soc., p. 182.—Tryon, Man., vol. 11, pl. 26, fig. 26.
San Diego, California, to Acapulco, Mexico.

CHLOROSTOMA MONTEREYI Kiener, 1850.
Coq. Vivantes, *Trochus*, pl. 33, fig. 1.
Baulinas Bay to Santa Barbara Islands, California.

CHLOROSTOMA REGINA Stearns, 1893. Nautilus, Dec. 1892, p. 85.
Proc. U. S. Nat. Mus., vol. 16, p. 350, pl. 50, figs. 6, 7.
Catalina and San Clemente Islands, California, to Magdalena Bay, Lower California, and Guadelupe Island.

Subgenus Promartynia Dall, 1909.

PROMARTYNIA PULLIGO Martyn, 1784. (Plate 17, figs. 5, 6.)
Figs. Nondescript Shells, table 2, pl. 76.—Tryon, Man., vol. 11, pl. 26, figs. 23–25.
Sitka, Alaska, to Santa Barbara Islands, California.

Subgenus Omphalius Philippi, 1847.

OMPHALIUS AUREOTINCTUS Forbes, 1850.
Proc. Zool. Soc., p. 271, pl. 11, fig. 7.
Santa Barbara Islands, California, to Magdalena Bay.

OMPHALIUS IMPRESSUS Jonas, 1848.
Conch. Cab., ed. 2, *Trochus*, p. 318, pl. 45, fig. 6.
San Diego, California (Cooke), to Tres Marias Island.

OMPHALIUS LIGULATUS Menke, 1850.
Zeitschr. f. Mal., p. 173.—Tryon, Man., vol. 11, pl. 29, figs. 58–60.
Monterey, California, to Acapulco, Mexico.

OMPHALIUS RETICULATUS Wood, 1828.
Index Test. Suppl., pl. 6, fig. 38.—Tryon, Man., vol. 11, pl. 29, figs. 63, 64.
San Pedro, California, to Panama. and South to Guayaquil and Galapagos.

OMPHALIUS MARIANUS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 359.—Tryon, Man., vol. 11, pl. 24, figs. 80–83.
Santa Barbara Island, to Payta, Peru.

Genus CALLIOSTOMA Swainson, 1840.

CALLIOSTOMA COSTATUM Martyn, 1784.
Figs. Nondescript Shells, table 1, pl. 34.—Tryon, Man., vol. 11, pl. 16, figs. 6, 9.
Sitka, Alaska, to San Diego, California.

CALLIOSTOMA COSTATUM CAERULEUM Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 359.
Neah Bay, Washington, to Monterey, California.

CALLIOSTOMA COSTATUM PICTUM Dall, 1919.

Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 359.

Neah Bay, Washington, to Monterey, California.

CALLIOSTOMA ANNULATUM Martyn, 1784.

Figs. Nondescript Shells, table 1, pl. 33.—Tryon, Man., vol. 11, pl. 67, fig. 43.

Forrester Island, Alaska, to Catalina Island, California. San Diego, Baker.

CALLIOSTOMA CANALICULATUM Martyn, 1784.

Figs. Nondescript Shells, table 1, pl. 32.—Tryon, Man., vol. 10, pl. 41, fig. 34.

Sitka, Alaska, to San Diego, California.

CALLIOSTOMA CANALICULATUM NEBULOSUM Dall, 1919.

Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 360.

San Diego, California.

CALLIOSTOMA CANALICULATUM TRANSLIRATUM Dall, 1919.

Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 360.—Tryon, Man., vol. 11, pl. 67, fig. 49.

Sitka Sound, Alaska.

CALLIOSTOMA VARIEGATUM Carpenter, 1865.

Proc. Acad. Nat. Sci. Phila., p. 61; Proc. U. S. Nat. Mus., vol. 24, p. 552, pl. 39, fig. 10.

Puget Sound to Cerros Island.

CALLIOSTOMA PLATINUM Dall, 1889.

Proc. U. S. Nat. Mus., vol. 12, p. 343, pl. 7, fig. 2.

Farallones Islands to San Diego, California, in deep water.

CALLIOSTOMA GLORIOSUM Dall, 1871.

Amer. Journ. Conch., vol. 7, p. 127; Proc. U. S. Nat. Mus., vol. 15, p. 201, pl. 22, fig. 5.

Twelve miles south of the Golden Gate and thence to San Diego, California.

CALLIOSTOMA ANTONII Koch, 1843.

Philippi, Abb. u. Beschr., *Trochus*, p. 1, fig. 4.

Santa Barbara (Cooper) to San Diego and Panama.

CALLIOSTOMA EXIMIUM Reeve, 1842.

Proc. Zool. Soc., p. 185.—Tryon, Man., vol. 10, pl. 65, fig. 56.

Catalina Island, California, to Mazatlan, Mexico.

CALLIOSTOMA TRICOLOR Gabb, 1865.

Proc. Cal. Acad. Sci., vol. 3, p. 186; Proc. U. S. Nat. Mus., vol. 15, p. 201, pl. 19, fig. 8.

Santa Cruz to San Diego, California. Magdalena Bay, H. coll.

CALLIOSTOMA GEMMULATUM Carpenter, 1864.

Suppl. Rep. Brit. Assoc., p. 653; Proc. U. S. Nat. Mus., vol. 15, p. 201, pl. 22, fig. 3.

San Pedro, California, to Gulf of California.

CALLIOSTOMA SUPRAGRANOSUM Carpenter, 1864.

Suppl. Rep. Brit. Assoc., p. 653.—Tryon, Man., vol. 11, p. 369, pl. 67, fig. 71.

San Pedro to San Diego, California. Pequena Bay. L. Cal. H. coll.

Cf C. var. parvum Williamson, Bull. S. Cal. Acad. Sci., v. IV, p. 118, 1905. preoccupied name.

4. = Calliotropis Seguenza, 1903. Afognak Id, Eyerdam

CALLIOSTOMA SPLENDENS Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 653; Proc. U. S. Nat. Mus., vol. 15, p. 201, pl. 21, fig. 5.
Monterey to San Diego, California.

CALLIOSTOMA TURBINUM Dall, 1895.
Proc. U. S. Nat. Mus., vol. 18, p. 8; vol. 24, pl. 39, fig. 1.
Point Conception to San Diego and the islands.

Genus TURCICULA Dall, 1881.

TURCICULA BAIRDII Dall, 1889.
Bull. Mus. Comp. Zool., vol. 18, p. 377; Proc. U. S. Nat. Mus., vol. 12, p. 346, pl. 7, fig. 3.
Bering Sea, northwest of Unimak Island, in 27 fathoms; (U. S. Bureau of Fisheries). Coast of Washington to Coronado Islands, in 238 to 822 fathoms.

Genus TURCICA A. Adams, 1854.

TURCICA CAFFEA Gabb, 1865.
Proc. Cal. Acad. Sci., vol. 3, p. 187; Pal. Cal., vol. 2, p. 16, pl. 3, fig. 27.
San Pedro, California, to Cape San Lucas.

Genus CIDARINA Dall, 190~~2~~. 9/

CIDARINA CIDARIS A. Adams, 1864.
Ann. Mag. Nat. Hist., ser. 3, vol. 14, p. 426; Proc. U. S. Nat. Mus., vol. 1~~2~~, 5/
2/ 4/ pl. 2, fig. ~~6~~.
Kasaän Bay, Alaska, to Cape San Quentin, Lower California. Pr. Wm. Sound. Eyerdam

4. Section SOLARICIDA Dall, 19~~02~~. 19/

CIDARINA CARLOTTA Dall, 1902. (Plate 18, fig. 4.)
Proc. U. S. Nat. Mus., vol. 24, No. 1264, p. 553.
Queen Charlotte Islands, British Columbia.

CIDARINA CERATOPHORA Dall, 1895.
Proc. U. S. Nat. Mus., vol. 18, p. 9; Bull. Mus. Comp. Zool. vol. 43, p. 350. pl. 3, fig. 2.
San Diego, California, to Mazatlan, Mexico, in deep water.

CIDARINA EQUATORIALIS Dall, 1908.
Bull. Mus. Comp. Zool., vol. 43, No. 6, p. 351, pl. 5, fig. 11.
San Diego, California, to Ecuador, in deep water.

Genus SOLARIELLA S. Wood, 1842.

SOLARIELLA PERAMABILIS Carpenter, 1864. (Plate 17, fig. 8.)
Suppl. Rep. Brit. Assoc., p. 653.—Tryon, Man., vol. 11, p. 312, pl. 67, figs. 59–61.
Forrester Island, Alaska, to San Diego and the Coronado Islands. Also Japan.

SOLARIELLA TRIPLOSTEPHANUS Dall, 1910. (Plate 18, figs. 1, 2.)
Nautilus, vol. 24, No. 3, p. 34.
Off San Diego, California, and south to Panama, in deep water.

SOLARIELLA RHYSSA Dall, 1919.

Proc. U. S. Nat. Mus., vol. 56, p. 360.

Catalina Channel, California.

? SOLARIELLA NUDA Dall, 1896.

Proc. U. S. Nat. Mus., vol. 18, p. 9; Bull. Mus. Comp. Zool., vol. 43, pl. 3, figs. 5, 7.

Monterey, California, to Clarion Island, in deep water.

Subgenus MACHAEROPLAX Friele, 1877.

MACHAEROPLAX VARICOSUS Mighels and Adams, 1842.

Boston Journ. Nat. Hist., vol. 4, p. 46, pl. 4, fig. 14.

Arctic Ocean to San Diego, California. Also Atlantic.

MACHAEROPLAX OBSCURUS Couthouy, 1838. **(Plate 18, figs. 11, 12.)**

Boston Journ. Nat. Hist., vol. 2, p. 100, pl. 3, fig. 2.

Arctic Ocean to the Fuca Strait. Circumboreal.

MACHAEROPLAX PAUPERCULUS Dall, 1919. **(Plate 18, fig. 15.)**

Proc. U. S. Nat. Mus., vol. 56, p. 363.

Arctic Ocean to the Aleutian Islands.

Genus MARGARITES Leach, 1847.

Subgenus PUPILLARIA Dall, 1909.

PUPILLARIA PUPILLA Gould, 1849. **(Plate 17, figs. 2, 10.)**

Proc. Boston Soc. Nat. Hist., vol. 3, p. 91; Rep. U. S. Expl. Exp., Moll., fig. 208.

Nunivak Island, Bering Sea, to San Pedro, California. ? San Diego, in deep water.

PUPILLARIA SORDIDA Hancock, 1846. **(Plate 17, figs. 11, 12.)**

Ann. Mag. Nat. Hist., vol. 18, p. 324.

Arctic coast, Bering Strait and the Okhotsk Sea. ? North Japan. Circumboreal.

PUPILLARIA CINEREA Couthouy, 1838.

Boston Soc. Journ. Nat. Hist., vol. 2, p. 99, pl. 3, fig. 9.

Bering Strait to Port Etches, Alaska. Circumboreal.

PUPILLARIA VORTICIFERA Dall, 1873.

Proc. Cal. Acad. Sci., vol. 5, p. 59, pl. 2, fig. 4.

Bering Strait and Sea, south and east to Unalaska, Alaska.

PUPILLARIA VORTICIFERA ECARINATA Dall, 1919.

Sci. Results Canadian Arctic Exp., vol. 8, p. 22 A, pl. 2, fig. 5.

Southwest of Point Barrow, Arctic Ocean, and south and east to the Aleutians.

PUPILLARIA VORTICIFERA SHARPII Pilsbry, 1898.

Proc. Acad. Nat. Sci. Phila., p. 486.

Unalaska to Port Althorp, Alaska.

PUPILLARIA SALMONEA Carpenter, 1864. **(Plate 18, figs. 6, 9.)**

Suppl. Rep. Brit. Assoc., p. 653; Proc. Cal., Acad. Sci., vol. 3, p. 158, Monterey, California.

? Departure Bay, B.Col. A.H. Tissot.

PUPILLARIA RHODIA Dall, 1920. (Plate 17, fig. 4.)
Carpenter, Proc. Acad. Nat. Sci. Phila., 1865, p. 62 (as *inflata*).
Port Althorp, Alaska, to San Diego, California.

PUPILLARIA HEALYI Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 368. 3
Arctic Ocean north of Bering Strait (Captain Healy).

PUPILLARIA SIMBLA Dall, 1913. (Plate 18, fig. 3.)
Proc. U. S. Nat. Mus., vol. 45, No. 2002, p. 592.
Off Santa Barbara Islands, California, 534 fathoms.

? PUPILLARIA RUDIS Dall, 1919. (Plate 18, figs. 13, 14.)
Proc. U. S. Nat. Mus., vol. 56, p. 364.
Bering Sea to Cook's Inlet, Alaska. Also Kamchatka.

Subgenus Lirularia Dall, 1909.

LIRULARIA SUCCINCTA Carpenter, 1864. (Plate 17, fig. 9.)
Suppl. Rep. Brit. Assoc., p. 653; Ann. Mag. Nat. Hist., ser. 3, vol. 14, p. 424.
Sitka, Alaska, to San Diego, California.

LIRULARIA FUNICULATA Carpenter, 1864. (Plate 18, fig. 10.)
Suppl. Rep. Brit. Assoc., p. 653; Ann. Mag. Nat. Hist., ser. 3, vol. 14, p. 425.
Neah Bay, Washington.

LIRULARIA OPTABILIS Carpenter, 1864. (Plate 17, fig. 7.)
Suppl Rep. Brit. Assoc., p. 653; Proc. Cal. Acad. Sci., vol. 3, p. 214.
Santa Barbara to San Pedro, California. Coronado Ids.

LIRULARIA OPTABILIS KNECHTI Arnold, 1903.
Pal. San Pedro, p. 332, pl. 5, fig. 4.
Pleistocene, San Pedro, California.

LIRULARIA OPTABILIS NODOSA Arnold, 1903.
Pal. San Pedro, p. 332, pl. 5, fig. 13.
Pleistocene, San Pedro, California.

LIRULARIA LACUNATA, Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 653; Ann Mag. Nat. Hist., ser. 3, vol. 14, p. 425.
Neah Bay, Washington, to San Diego, California.

LIRULARIA PARCIPICTA Carpenter, 1864. (Plate 17, fig. 3.)
Suppl. Rep. Brit. Assoc., p. 653; Proc. Cal. Acad. Sci., vol. 3, p. 157.
Sitka, Alaska, to San Diego, California. San Martin Id. L. Cal. Baker.

LIRULARIA PARCIPICTA PEDROANA Arnold, 1903.
Pal. San Pedro, p. 333, pl. 5, fig. 16.
Pleistocene, San Pedro, California.

LIRULARIA INFLATULA Dall, 1920.
Carpenter, Suppl. Rep. Brit. Assoc., p. 653, No. 300 (as *inflata*), 1864.
Puget Sound and Neah Bay.

LIRULARIA LIRULATA Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 653; Proc. Acad. Nat. Sci. Phila., for 1865, p. 61.
Port Etches, Alaska, to San Diego, California.

LIRULARIA LIRULATA CONICA Carpenter, 1864. (Plate 17, fig. 1.)
Suppl. Rep. Brit. Assoc., p. 653; Proc. Acad. Nat. Sci. Phila. for 1865, p. 61.
Puget Sound.

LIRULARIA LIRULATA OBSOLETA Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 653; Proc. Acad. Nat. Sci. Phila. for 1865, p. 61.
Neah Bay, Washington.

LIRULARIA LIRULATA SUBELEVATA Carpenter, 1864.
Suppl. Rep. Brit. Asso., p. 653; Proc. Acad. Nat. Sci. Phila. for 1865, p. 61.
Neah Bay, Washington.

LIRULARIA ACUTICOSTATA Carpenter, 1864. (Plate 18, fig. 5.)
Suppl. Rep. Brit. Assoc., p. 653; Proc. Cal. Acad. Sci., vol. 3, p. 157.
Bodega Bay to Coronado Islands. San Martin Id. L. Cal. Baker.

LIRULARIA ALTHORPENSIS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 365.
Granite Cove, Port Althorp, Alaska.

Subgenus Margarites Leach, s. s.

MARGARITES HELICINUS Phipps, 1773.
Voy. N. Pole, App., p. 198; Binney's Gould's Inv. Mass., p. 281, fig. 542.
Bering Strait, all coasts of Bering Sea, and south to Catalina Island, California. Also Atlantic.

MARGARITES HELICINUS ELEVATUS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 366.
Baranoff Island, Alaska.

MARGARITES HELICINUS EXCAVATUS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 366.
Amchitka and Middleton Islands, Alaska.

MARGARITES BERINGENSIS E. A. Smith, 1899. (Plate 16, figs. 5, 6.)
Proc. Mal. Soc. London, vol. 3, p. 206, fig. 1.
Arctic Ocean, Plover Bay, Commander Islands, and Petrel Bank, Bering Sea.

MARGARITES ALBOLINEATUS E. A. Smith, 1899. (Plate 16, figs. 3, 4.)
Proc. Mal. Soc. London, vol. 3, p. 206, fig. 2.
All coasts of Bering Sea.

MARGARITES OLIVACEUS Brown, 1827.
Ill. Conch. Gt. Brit., ed. 1, p. IV, pl. 46, figs. 30–31.
St. Lawrence Island (Krause); Atka Island, Aleutians. Also Atlantic.

MARGARITES PRIBILOFFENSIS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 366.
Arctic Ocean to off Pribilof Islands, Bering Sea.

MARGARITES FRIGIDUS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 357.
Arctic Ocean and south to Nunivak Island, Bering Sea; and Windfall Harbor, Admiralty Island, Alaska.

MARGARITES MARGINATUS Dall, 1919. (Plate 16, figs. 1, 2.)
Proc. U. S. Nat. Mus., vol. 56, p. 367.
Arctic Ocean and Bering Sea, south to Oregon. Also Atlantic.

M. laevior Jeffreys?
Forrester Id. Oldroyd.

Grant Id. and Craig, Alaska, Willett,

Add Vitrinella columbiana Bartsch, 1921,
Proc. Biol. Soc. Wash. vol. 34, p. 39,
Departure Bay, B.C.

MARGARITES HYPOLISPUS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, p. 367.
Arctic Ocean north of Bering Strait.

MARGARITES (VAHLII. var.?) TENUISCULPTUS Carpenter, 1865. Suppl. Rep. B. A., p. 653. 1864,
Proc. Acad. Nat. Sci. Phila., p. 61.
Neah Bay and Puget Sound. (Plover Bay, Krause?)

MARGARITES UMBILICALIS Broderip and Sowerby, 1829. (Plate 18, figs. 7, 8.)
Mal. and Conch. Mag., vol. 1, p. 26; Conch. Ill., *Margarita*, fig. 5.
Arctic Coast. Circumboreal.

Genus MARGARITOPSIS Thiele, 1906.

MARGARITOPSIS FRIELEI Krause, 1886.
Arch. f. Naturg., vol. 51, heft 3, p. 263, pl. 16, figs. 2*a–c;* Nachr. Mal. Ges. 1906, p. 15.
Bering Strait region.

Genus GIBBULA Risso, 1826.

GIBBULA ADRIATICA (Philippi) CANFIELDI Dall, 1871.
Enum. Moll. Sicil., vol. 2, p. 153; Amer. Journ. Conch., vol. 7, p. 129; Proc. U. S. Nat. Mus., vol. 24, pl. 39, fig. 2.
Monterey (Dall); San Pedro (Johnstone); San Diego (Bryant). Also Pleistocene and Mediterranean.

Family VITRINELLIDAE.

Genus VITRINELLA C. B. Adams, 1850.

VITRINELLA WILLIAMSONI Dall, 1892.
Proc. U. S. Nat. Mus., vol. 15, p. 202, pl. 21, figs. 2, 3.
San Pedro, California.

VITRINELLA OLDROYDI Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 32, No. 1520, p. 167, fig. 1.
San Pedro, California, to Point Abreojos, Lower California.

VITRINELLA ESHNAURI Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 32, No. 1520, p. 168, fig. 2.
San Pedro, California.

VITRINELLA ALASKENSIS Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 32, p. 168, fig. 3.
Unalaska, Aleutian Islands.

Section DOCOMPHALA Bartsch, 1907.

VITRINELLA STEARNSII Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 32, p. 169, fig. 4.
Monterey, California.

VITRINELLA BERRYI Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 32, p. 170, fig. 5.
Monterey to San Diego, California.

Genus CYCLOSTREMA Marryatt, 1818.

CYCLOSTREMA DIEGENSIS Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 32, p. 172, fig. 7.
San Diego, California.

CYCLOSTREMA MIRANDA Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 39, p. 230, pl. 39. figs. 1–3.
San Pedro, California.

CYCLOSTREMA BALDRIDGAE Bartsch, 1911.
Proc. U. S. Nat. Mus., vol. 39, p. 229, pl. 39, figs. 7–9.
San Pedro, California, to Gulf of California.

Genus CIRCULUS Jeffreys, 1865.

? CIRCULUS ROSSELLINUS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 368.
San Diego, California.

CIRCULUS COSMIUS Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 32, p. 173, fig. 8.
Catalina Island, California, to Panama. Ecuador.

Genus CYCLOSTREMELLA Bush, 1897.

CYCLOSTREMELLA CALIFORNICA Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 32, p. 174, fig. 10.
San Pedro to San Diego, California. Pleistocene. Mty. 12 fm. Berry.

CYCLOSTREMELLA CONCORDIA Bartsch, 1920.
Journ. Wash. Acad. Sci., vol. 10, 1920, p. 572.
Olga, Washington.

Genus SCISSILABRA Bartsch, 1907.

SCISSILABRA DALLI Bartsch, 1907.
Proc. U. S. Nat. Mus., vol. 32, p. 176, fig. 11.
Monterey, California, to Gulf of California.

Genus LEPTOGYRA Bush, 1897.

LEPTOGYRA ALASKANA Bartsch, 1910.
Nautilus, vol. 23, No. 11, p. 136, pl. 11, figs. 4–6.
Port Graham, Cooks Inlet, Alaska.

Genus TEINOSTOMA A. Adams, 1854.

TEINOSTOMA SUPRAVALLATA Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 652; Proc. Cal. Acad. Sci., vol. 3, p. 215.
Monterey to the Gulf of California.

TEINOSTOMA INVALLATA Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 652; Proc. Cal. Acad. Sci., vol. 3, p. 215.
Monterey to Gulf of California.

Pt. Abreojos, L. Cal, H. coll.

1, = S. californica Bartsch. MS. not Watson.

2. = Adeorbis c. fide Bartsch.

Pta. Banda, L. Cal., Orcutt.

Section PSEUDOROTELLA Fischer, 1857.

TEINOSTOMA SAPIELLA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 369.
San Pedro to San Diego, California.

TEINOSTOMA BIBBIANA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 369.
San Diego, California.

TEINOSTOMA (fragment).
South Coronado Island.

TEINOSTOMA SALVANIA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 369.
South Coronado Island.

Superfamily ZYGOBRANCHIA.

Family SCISSURELLIDAE.

Genus SCISSURELLA Orbigny, 1823.

SCISSURELLA KELSEYI Dall, 1905.
Nautilus, vol. 18, No. 11, p. 124.
Queen Charlotte Islands, British Columbia, to South Coronado Island.

SCISSURELLA CHIRICOVA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 56, no. 2295, p. 370.
Off Chirikoff Island, Alaska, in 695 fathoms.

Genus SCHISMOPE Jeffreys, 1856.

SCHISMOPE RIMULOIDES Carpenter, 1865.
Proc. Zool. Soc., p. 271.
South Coronado Island, to Mazatlan, Mexico.

(1) **SCHISMOPE CORONATA Watson, 1886.**
Challenger, Rep. Gastropoda, p. 114, pl. 8, fig. 4.
Venice to San Diego, California. Also Tahiti.

(2) **? SCHISMOPE CALIANA Dall, 1919.**
Proc. U. S. Nat. Mus., vol. 56, No. 2295, p. 370.
San Diego, California.

Family HALIOTIDAE.

Genus HALIOTIS Linnaeus, 1758.

HALIOTIS CRACHERODII Leach, 1817.
Zool. Misc., p. 131; Conch. Icon., *Haliotis*, fig. 23.
Coos Bay, Oregon, to Santa Rosalia, Lower California.

HALIOTIS CRACHERODII HOLZNERI Hemphill, 1907. **(Plate 20.)**
Trans. San Diego Soc., Nat Hist., vol. 1, No. 2, p. 4.
San Pedro, California, to Lower California.

HALIOTIS CRACHERODII SPLENDIDULA Williamson, 1892.
Proc. U. S. Nat. Mus., vol. 15, p. 198.
Point Vincent, California.

HALIOTIS CRACHERODII IMPERFORATA Dall, 1919. (Plate 21.)
Proc. U. S. Nat. Mus., vol. 56, p. 370.
Santa Barbara Islands, California.

HALIOTIS CALIFORNIENSIS Swainson, 1823.
Zool. Illustr., vol. 2, pl. 80.—Reeve, Conch. Icon., *Haliotis*, pl. 8, fig. 26.
On the Islands; the Farallones to Guadelupe Island.

HALIOTIS CALIFORNIENSIS BONITA Orcutt, 1900.
West Amer. Scientist, vol. 10, No. 5, p. 30.
Santa Barbara to Lower California and Guadelupe Island. Mexico? (Orcutt).

HALIOTIS RUFESCENS Swainson, 1822.
Bligh Cat. Appendix, p. 2; Conch. Icon., *Haliotis*, fig. 6.
Bodega Bay, California, south to La Paz, Lower California (Rich).

HALIOTIS FULGENS Philippi, 1845.
Zeitschr. f. Mal., p. 150; Conch. Icon., *Haliotis*, fig. 9.
Farallones Islands (P. P. C.) and Catalina Island, California, to Gulf of California.

HALIOTIS WALLALENSIS Stearns, 1899. (Plate 22.)
Proc. U. S. Nat. Mus., vol. 22, No. 1191, p. 140.
Mendocino County, California.

HALIOTIS KAMTSCHATKANA Jonas, 1845. (Plate 19.)
Zeitschr. f. Mal., p. 168; Conch. Icon., *Haliotis*, pl. 3, fig. 8.
Kamchatka Sea (Midd.) Sitka, Alaska, to Redondo, California, and Sendai, Japan.

HALIOTIS CORRUGATA Gray, 1828.
Wood, Index Test. Suppl., pl. 8, fig. 6.
Monterey, California, to San Quentin Bay, Lower California.

HALIOTIS ASSIMILIS Dall, 1878.
Proc. U. S. Nat. Mus., vol. 1, p. 46.—Tryon, Man., vol. 12, pl. 22, fig. 29.
Farallones Islands to San Diego, California, in deep water.

Family FISSURELLIDAE.

Subfamily Fissurellinae.

Genus FISSURELLA Bruguière, 1791.

FISSURELLA VOLCANO Reeve, 1849.
Conch. Icon., *Fissurella*, fig. 2.
Crescent City, California, to Panama.

FISSURELLA VOLCANO CRUCIFERA Dall, 1908.
Proc. U. S. Nat. Mus., vol. 34, No. 1610, p. 256.
Monterey to Lower California. San Martin Id. L. Cal. Baker.

Var. diegoensis Orcutt, Nautilus, vol. 33, p. 62, Oct. 1919.

Subfamily FISSURELLIDINAE.

Genus MEGATHURA Nuttall (in Pilsbry), 1891.

MEGATHURA CRENULATA Sowerby, 1825.
Tankerville Cat., App., p. VI; Conch. Illus., *Fissurella*, fig. 18.
Monterey Bay to Cerros Island, Lower California.

Genus MEGATEBENNUS Pilsbry, 1890.

MEGATEBENNUS BIMACULATUS Dall, 1871.
Amer. Journ. Conch., vol. 7, p. 132, pl. 15, fig. 7.
Forrester Island, Alaska, to Cape San Lucas.

Genus LUCAPINELLA Pilsbry, 1890.

LUCAPINELLA CALLOMARGINATA (Carpenter MS.) Dall, 1871.
Amer. Journ. Conch., vol. 7, p. 133, pl. 15, fig. 8.
Bodega Bay, California, to Magdalena Bay, Lower California. to Valparaiso.

Subfamily EMARGINULINAE.

Genus DIADORA Gray, 1821.

DIADORA ASPERA Eschscholtz, 1833.
Zool. Atlas, pt. 5, p. 21, pl. 23, fig. 5.
Cook's Inlet, Alaska, to Magdalena Bay, Lower California. Afognak Id. Eyerdam.

DIADORA ASPERA DENSICLATHRATA Reeve, 1850.
Conch. Icon., *Fissurella*, fig. 64.
Monterey, California, to San Quentin Bay, Lower California, and Socoro Island.

DIADORA INAEQUALIS Sowerby, 1834.
Proc. Zool. Soc., p. 126; Conch. Illus., *Fissurella*, fig. 45.
Santa Barbara, California, to Manta, Ecuador, and the Galapagos Islands.

DIADORA MURINA (Carpenter MS.) Dall, 1885.
Proc. U. S. Nat. Mus., vol. 8, No. 34, p. 543; vol. 15, p. 197.—ARNOLD, Pal. San Pedro, p. 339.
Crescent City, California, to Magdalena Bay, Lower California. La Paz, Gulf of Cal, and Tres Marias Ids.

Genus PUNCTURELLA Lowe, 1827.

PUNCTURELLA MAJOR Dall, 1891.
Proc. U. S. Nat. Mus., vol. 14, p. 189; vol. 17, p .712, pl. 26, fig. 4.
Pribilof Islands, Bering Sea, and southward to Dixon Entrance, Alaska.

PUNCTURELLA GALEATA Gould, 1846.
Proc. Boston Soc. Nat. Hist., vol. 2, p. 159; Rep. U. S. Expl. Exp., Moll., p. 369, pl. 31, figs. 476, 477.
Unalaska, Aleutian Islands, south to Santa Rosa Island, California.

PUNCTURELLA CUCULLATA Gould, 1846.
Proc. Boston Soc. Nat. Hist., vol. 2, p. 159; Rep. U. S. Expl. Exp., Moll. p. 368, pl. 331, fig. 475.
Kodiak Island, Alaska, to La Paz, Lower California.

Puncturella eyerdami Dall 1924, Nautilus, 37 - p. 133. April,
Knight Id. Pr. Wm. Sound, Eyerdam.

PUNCTURELLA MULTISTRIATA Dall, 1914.
Nautilus, vol. 28, No. 5, p. 63.
Atka Island, Aleutians, east and south to San Diego and Cortez Bank, California.

PUNCTURELLA COOPERI Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 651; Proc. Cal. Acad. Sci., vol. 3, p. 214.
Kasaän Bay, Alaska, to Santa Rosa Island, California. San Diego, Kelsey

PUNCTURELLA CARYOPHYLLA Dall, 1914.
Nautilus, vol. 28, No. 5, p. 63.
Off San Diego, California, in 67 to 81 fathoms.

PUNCTURELLA LONGIFISSA Dall, 1914.
Nautilus, vol. 28, No. 5, p. 63.
Bering Island, Bering Sea.

Genus HEMITOMA Swainson, 1840.

HEMITOMA YATESII Dall, 1901.
Nautilus, vol. 14, No. 11, p. 125; Proc. U. S. Nat. Mus., vol. 24, pl. 38, figs. 1–3.
Forrester Island, Alaska, to Monterey, California. Panama?

HEMITOMA BELLA Gabb, 1865.
Proc. Cal. Acad. Sci., vol. 3, p. 188.
Santa Cruz to San Pedro, California. San Diego, Gripp.

HEMITOMA GOLISCHAE Dall, 1916. (Plate 5, fig. 2.)
Nautilus, vol. 30, No. 6, p. 61.
San Nicolas Island, California.

Subclass AMPHINEURA.

Order POLYPLACOPHORA.

Superfamily EOPLACOPHORA.

Family LEPIDOPLEURIDAE.

Genus LEPIDOPLEURUS Risso, 1826.

Section LEPTOCHITON Gray, 1847.

LEPIDOPLEURUS CANCELLATUS Sowerby, 1839.
Conch. Illus. Chiton, figs. 104, 105.—Pilsbry, Man., pl. 3, figs. 54–58.
Bering Strait to Sitka and Oregon. Also Atlantic.

LEPIDOPLEURUS RUGATUS Carpenter, 1892.
Pilsbry, Man., p. 11, pl. 3, figs. 67–70.
Monterey, California, to San Tomas, Lower California.

LEPIDOPLEURUS INTERNEXUS Carpenter, 1892.
Pilsbry, Man., p. 12.
Belkoffski, Alaska, to San Diego, California.

LEPIDOPLEURUS FARALLONIS Dall, 1908.

Bull. Mus. Comp. Zool., vol. 43, No. 6, p. 355.

Farallones Islands, California, to Panama, in deep water.

LEPIDOPLEURUS AMBUSTUS Dall, 1919.

Proc. U. S. Nat. Mus., vol. 55, p. 499.

Santa Barbara Channel, 20 to 40 fathoms. Monterey, Berry.

LEPIDOPLEURUS BELKNAPI Dall, 1878.

Proc. U. S. Nat. Mus., vol. 1, p. 1.—Pilsbry, Man., p. 7, pl. 1, figs. 18–22.

Off Aleutian Islands, 1,006 fathoms; off Luzon, Philippine Islands, 1,050 fathoms.

LEPIDOPLEURUS LYCURGUS Dall, 1919.

Proc. U. S. Nat. Mus., vol. 55, p. 500.

Catalina Island, California.

LEPIDOPLEURUS OLDROYDI (Bartsch) Dall, 1919.

Proc. U. S. Nat. Mus., vol. 55, p. 500.

Monterey to Catalina Island, California.

LEPIDOPLEURUS LURIDUS Dall, 1902.

Proc. U. S. Nat. Mus., vol. 24, No. 1264, p. 566.

Puget Sound, 48 fathoms; Panama, 1,270 fathoms.

LEPIDOPLEURUS ALASCENSIS Thiele, 1909.

Zoologica, vol. 22, Heft 56, p. 13, pl. 1, figs. 51–60.

"Alaska" (Thiele).

LEPIDOPLEURUS MESOGONUS Dall, 1902.

Proc. U. S. Nat. Mus., vol. 24, p. 555.

Bering Sea, 688 fathoms; Queen Charlotte Islands, British Columbia, in 1,588 fathoms.

Section XIPHIOZONA Berry, 1919.

LEPIDOPLEURUS NEXUS Carpenter, 1864.

Suppl. Rep. Brit. Assoc., p. 650.—Pilsbry, Man., p. 11.

Catalina Island, California, to the Gulf of California.

LEPIDOPLEURUS HEATHI Berry, 1919.

Lorquinia, Jan., 1919, p. 5; Proc. Cal. Acad. Sci., ser. 4, vol. 9, p. 6, pl. 1, figs. 1, 2; pl. 2.

Off Monterey, California, in 15 fathoms (S. S. Berry).

Genus OLDROYDIA Dall, 1894.

OLDROYDIA PERCRASSA Dall, 1894.

Nautilus, vol. 8, No. 8, p. 90; Zoologica, vol. 22, Heft 56, pt. 2, p. 71, pl. 7, figs. 1–8.

Monterey, California, to San Martin Island, Lower California.

Genus HANLEYA Gray, 1857.

HANLEYA HANLEYI Bean, 1844.

Thorpe, Brit. Marine Conch., p. 263, fig. 57.—Pilsbry, Man., p. 17, pl. 3. figs. 71–79.

Plover Bay, Bering Strait, to Monterey, California. Also Atlantic.

HANLEYA HANLEYI SPICATA Berry, 1919.

Proc. Cal. Acad. Sci., ser. 4, vol. 9, No. 1, p. 8, figs. 5, 6.

Monterey, California.

Superfamily MESOPLACOPHORA.

Family LEPIDOCHITONIDAE.

Genus LEPIDOCHITONA Gray, 1821.

Section TONICELLA Carpenter, 1873.

LEPIDOCHITONA MARMOREA Fabricius, 1780.

Fauna Grönl., p. 420.—Pilsbry, Man., pl. 10, figs. 8–15.

Circumboreal. Arctic and Bering Seas; Aleutian Islands south to Forrester Island, Alaska. Also Japan.

LEPIDOCHITONA SUBMARMOREA Middendorff, 1846.

Bull. Acad. Sci. St. Petersburg, vol. 6, No. 8, p. 120; Sibirische Reise, p. 178, pl. 14, figs. 7, 10; pl. 15, figs. 7, 8.

Aleutian Islands to Puget Sound. Also the Okhotsk Sea and Japan.

LEPIDOCHITONA SITKENSIS Middendorff, 1846.

Bull. Acad. Sci. St. Petersburg, vol. 6, p. 121; Mal. Rossica, pl. 13, figs. 1, 2.

Sitka, Alaska.

LEPIDOCHITONA LINEATA Wood, 1815.

General Conch., p. 15, pl. 2, figs. 4, 5.

On the west, the Okhotsk Sea and northern Japan. On the east, from the Aleutian Islands to San Diego, California.

LEPIDOCHITONA RUBER Linnaeus, 1767.

Syst. Nat., ed. 12, p. 1107.—Pilsbry, Man., vol. 14, pl. 7, figs. 50–56; vol. 15. pl. 15, fig. 25.

Circumboreal. Arctic Ocean to Monterey, California.

LEPIDOCHITONA SACCHARINA Dall, 1878.

Proc. U. S. Nat. Mus., vol. 1, p. 2.—Pilsbry, Man., vol. 14, p. 44; vol. 15. p. 66, pl. 15, figs. 22–24.

Pribilof, Bering, and Aleutian Islands, in shallow water. San Diego, California, in 101 fathoms.

Section LEPIDOCHITONA s. s.

LEPIDOCHITONA DENTIENS Gould, 1846.

Proc. Boston Soc. Nat. Hist., vol. 2, p. 145; Rep. U. S. Expl. Exp. Moll., fig. 433.—Pilsbry, Man., vol. 15, pl. 15, fig. 26.

Puget Sound to Magdalena Bay, and Socorro Island.

LEPIDOCHITONA ALBA Linnaeus, 1767.

Syst. Nat., ed. 12, p. 1107.—Pilsbry, Man., vol. 14, p. 70, pl. 7, figs. 35–38.

Circumboreal. Arctic Ocean to San Diego, California.

LEPIDOCHITONA SHARPEI Pilsbry, 1896.

Nautilus, vol. 10, No. 5, p. 50.

Unalaska, Aleutian Islands.

Section BASILIOCHITON Berry, 1918.

LEPIDOCHITONA FLECTENS Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 649; Proc. Acad. Nat. Sci. Phila., 1865, p. 90.—Pilsbry, Man., vol. 15, pl. 15, figs. 34–37.
Vancouver Island to San Diego, California. Forrester Id. Willett.

LEPIDOCHITONA FLECTENS HEATHII Berry, 1911.
Proc. Acad. Nat. Sci. Phila., p. 487, pl. 40, text figs. 1–7.
Monterey to San Pedro, California.

Section CYANOPLAX Pilsbry, 1892.

LEPIDOCHITONA HARTWEGII Carpenter, 1855.
Proc. Zool. Soc., p. 231.—Pilsbry, Man., vol. 14, p. 45, pl. 14, figs. 81–85.
Forrester Island, Alaska, to the Gulf of California.

LEPIDOCHITONA HARTWEGII NUTTALLI Carpenter, 1855.
Proc. Zool. Soc., p. 231.—Pilsbry, Man., vol. 14, p. 46.
Straits of Fuca to Turtle Bay, Lower California.

LEPIDOCHITONA RAYMONDI Pilsbry, 1894.
Nautilus, vol. 8, No. 4, p. 46.
? Seward, Alaska, to San Pedro, California. Forrester Id. Willett.

LEPIDOCHITONA FACKENTHALLAE Berry, 1919.
Lorquinia, Jan. 1919, p. 5.
Pacific Grove, Monterey Bay. (S. S. Berry.)

LEPIDOCHITONA LOWEI Pilsbry, 1918.
Nautilus, vol. 31, No. 4, p. 127.
San Pedro, California.

Subgenus Spongioradsia Pilsbry, 1893.

SPONGIORADSIA ALEUTICA Dall, 1878.
Proc. U. S. Nat. Mus., vol. 1, p. 1.—Pilsbry, Man., vol. 15, p. 65, pl. 15, figs. 30–33.
Aleutian Islands.

Genus SCHIZOPLAX Dall, 1878.

SCHIZOPLAX BRANDTII Middendorff, 1846.
Bull. Acad. Sci. St. Petersburg, vol. 6, p. 117.—Pilsbry, Man., vol. 14, pl. 11, figs. 32–37.
Shantar Bay, Okhotsk Sea; Bering, Pribilof, and Aleutian Islands, and south to Cape Fox, Alaska. Afognak Id. Eyerdam.

SCHIZOPLAX MULTICOLOR Dall, 1920.
Nautilus, vol. 34, No. 1, July, 1920, p. 22.
Bering Sea.

Genus NUTTALLINA Carpenter, 1873.

NUTTALLINA CALIFORNICA Reeve, 1847.
Reeve, Conch. Icon., *Chiton*, pl. 16, fig. 89.—Pilsbry, Man., vol. 14, pl. 54, figs. 23, 24; pl. 56, figs. 12–18.
Straits of Fuca to San Diego, California.

NUTTALLINA FLUXA Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 649.—Pilsbry, Man., vol. 14, pl. 54, figs. 21, 22; pl. 56, figs. 19, 20.
Point Conception, California, to Gulf of California.

NUTTALLINA THOMASI Pilsbry, 1898.
Proc. Acad. Nat. Sci. Phila., p. 289.
Monterey, California.

Family ISCHNOCHITONIDAE.

Genus ISCHNOCHITON Gray, 1847.

Subgenus Stenoplax, Carpenter, 1878.

STENOPLAX FALLAX Carpenter, 1892.
Pilsbry, Man., vol. 14, p. 59, pl. 16, figs. 17–18.
Vancouver Island to Todos Santos Bay, Lower California.

STENOPLAX BIARCUATA Dall, 1903.
Proc. Biol. Soc. Wash., vol. 16, p. 176.
Santa Barbara to San Diego, California.

Section STENORADSIA Carpenter, 1878.

STENOPLAX ACRIOR Carpenter, 1892.
Pilsbry, Man., vol. 14, p. 61, pl. 14, figs. 86–89.
San Miguel Island, California, to Gulf of California.

STENOPLAX MAGDALENENSIS Hinds, 1843.
Zool. *Sulphur's* Voy. Moll., p. 54, pl. 19, fig. 1.
Coos Bay, Oregon, to Magdalena Bay, Lower California.

STENOPLAX CONSPICUA Carpenter, 1892.
Pilsbry, Man., vol. 14, p. 63, pl. 15, figs. 91–96.
Monterey, California, to Gulf of California.

STENOPLAX SARCOSA Dall, 1902.
Proc. U. S. Nat. Mus., vol. 24, No. 1264, p. 558.
San Pedro, California, to Gulf of California.

Subgenus Ischnochiton s. s.

ISCHNOCHITON MARMORATUS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 55, No. 2283, p. 503.
Pacific Grove, Monterey Bay, California.

ISCHNOCHITON BRYANTI Dall, 1919.
Proc. U. S. Nat. Mus., vol. 55, No. 2283, p. 503.
"California" (Bryant).

ISCHNOCHITON BRUNNEUS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 55, No. 2283, p. 504.
San Diego, California.

ISCHNOCHITON LISTRUM Dall, 1919.
Proc. U. S. Nat. Mus., vol. 55, No. 2283, p. 504.
San Diego, California.

ISCHNOCHITON RITTERI Dall, 1919.
Proc. U. S. Nat. Mus., vol. 55, No. 2283, p. 505.
Juneau Channel, Alaska.

ISCHNOCHITON RETIPOROSUS Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 649.—Pilsbry, Man., vol. 15, p. 77; pl. 16, figs. 47, 50–53.
Victoria, British Columbia, to San Pedro, California. Forrester Id, Willett,

ISCHNOCHITON RETIPOROSUS PUNCTATUS Whiteaves, 1886.
Trans. Roy. Soc. Canada, vol. 4, pt. 4, p. 125, figs.
Duncan Bay, British Columbia.

ISCHNOCHITON VENEZIUS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 55, No. 2283, p. 509.
Venice, Los Angeles County, California.

ISCHNOCHITON SCROBICULATUS Middendorff, 1847.
Mal. Rossica, vol. 1 p. 127, pl. 14, figs. 4–7.—Pilsbry, Man., vol. 14, p. 76, pl. 8, figs. 66–68.
Bodega Bay, California.

ISCHNOCHITON LIVIDUS Middendorff, 1847.
Mal. Rossica, vol. 1, p. 124, pl. 13, figs. 3, 4.—Pilsbry, Man., vol. 14, p. 76, pl. 6, figs. 22–24.
Sitka, Alaska.

ISCHNOCHITON ALASCENSIS Thiele, 1910.
Zoologica, vol. 22, Heft. 56, pt. 2, p. 79, pl. 7, figs. 58–61.
Sitka, Alaska.

ISCHNOCHITON INTERSTINCTUS Gould, 1846.
Proc. Boston Soc. Nat. Hist., vol. 2, p. 145; Rep. U. S. Expl. Exp., Moll., p. 315, pl. 23, fig. 423.
Aleutian Islands, to Sitka and Catalina Island, California.

ISCHNOCHITON RADIANS Carpenter, 1892.
Pilsbry, Man., vol. 14, p. 121; vol. 15, p. 75, pl. 16, figs. 48, 49.
Prince of Wales Island, Alaska, to San Pedro, California.

ISCHNOCHITON SCABRICOSTATUS Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 649.—Pilsbry, Man., vol. 14, p. 121; vol. 15, p. 76, pl. 16, figs. 55, 56.
San Pedro and Catalina Island, California, to Cerros Island, Lower California.

ISCHNOCHITON AUREOTINCTUS Carpenter, 1892.
Pilsbry, Man., vol. 14, p. 123.
Catalina Island, 80 fathoms, to Cerros Island, Lower California.

ISCHNOCHITON VEREDENTIENS Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 649.—Pilsbry, Man., vol. 14, p. 122.
Point New Year to Catalina Island, California.

ISCHNOCHITON NEWCOMBI Carpenter, 1892.
Pilsbry, Man., vol. 14, p. 120.
Catalina Island, California.

64/ **ISCHNOCHITON SERRATUS Carpenter, 1892.**
Ann. Mag. Nat. Hist., ser. 3, vol. 13, p. 315.—Pilsbry, Man., vol. 14, p. 122; vol. 15, p. 78, pl. 16, figs. 42–46.
San Diego, California, to Gulf of California.

ISCHNOCHITON CORRUGATUS Carpenter, 1892.
Pilsbry, Man., vol. 14, p. 123.
Catalina Island, California, to Todos Santos Bay, Lower California.

ISCHNOCHITON BERRYI Dall, 1919.
Proc. U. S. Nat. Mus., vol. 54, No. 2283, p. 507.
Monterey to San Pedro, California.

Section LEPIDOZONA Pilsbry, 1892.

ISCHNOCHITON WILLETTI Berry, 1917.
Proc. Cal. Acad. Sci., ser. 4, vol. 7, p. 236, figs. 1, 2.
Forrester Island, Alaska.

ISCHNOCHITON MERTENSII Middendorff, 1846.
Bull. Acad. Sci. St. Petersburg, vol. 6, p. 118.—Pilsbry, Man., vol. 14, p. 125, pl. 26, figs. 20–26.
Sitka, Alaska, to San Pedro, California. (Lower California?)

ISCHNOCHITON COOPERI Carpenter, 1892.
Pilsbry, Man., vol. 14, p. 127, pl. 26, figs. 27–30.
Mendocino County, California, to Catalina Island.

ISCHNOCHITON COOPERI ACUTIOR (Carpenter MS.) Dall, 1919.
Proc. U. S. Nat. Mus., vol. 55, No. 2283, p. 508.
San Diego, California, to Los Animas Bay, Lower California.

ISCHNOCHITON CLATHRATUS Reeve, 1847.
Conch. Icon., *Chiton*, pl. 18, fig. 113.—Pilsbry, Man., vol. 14, p. 128, pl. 26, figs. 31–34.
Baulinas Bay, California, to Gulf of California.

ISCHNOCHITON DECIPIENS Carpenter, 1892.
Pilsbry, Man., vol. 14, p. 123.
Catalina Island to Monterey, California.

ISCHNOCHITON SINUDENTATUS Carpenter, 1892.
Pilsbry, Man., vol. 14, p. 128.
Monterey, California.

> **ISCHNOCHITON ASTHENES Berry, 1919.**
Proc. Cal. Acad. Sci., ser. 4, vol. 9, No. 1, pl. 8; Lorquinia, Jan. 1919, p. 7.
White's Point, San Pedro, California (S. S. Berry).

ISCHNOCHITON STEARNSII Dall, 1902.
Proc. U. S. Nat. Mus., vol. 24, No. 1264, p. 557.
Off the Farallones Islands, California, in 391 fathoms.

ISCHNOCHITON GOLISCHI Berry, 1919.
Lorquinia, Jan., 1919, p. 7. vol. II. p. 47.
Off Santa Monica, California, in 100 fathoms (S. S. Berry).

Ischnochiton oldroydi Dall, 1919.
Proc. U. S. N. Mus. vol. 55 p. 500.
Monterey, Cal.

Magdalena Bay, H. coll.

San Martin Id. L. Cal. (Baker).

< I.(L.) gallina Berry. Proc. Mal. Soc. London, XVI, p. 228, pl. 11, figs. 1, 2, July, 1925. Off White's Pt. S. P.

Proc. Mal. Soc. London, XVI, p. 229, pl. 11. figs. 3, 4. July, 1925.

Section RHOMBOCHITON Berry, 1919.

ISCHNOCHITON REGULARIS Carpenter, 1855.
Proc. Zool. Soc., p. 232.—Pilsbry, Man., vol. 14, p. 142, pl. 18, figs. 41–46.
Mendocino County, California, to Monterey.

Section TRIPOPLAX Berry, 1919.

ISCHNOCHITON TRIFIDUS Carpenter, 1864.
Suppl. Rep. Brit, Assoc. p. 649.—Pilsbry, Man., vol. 14, p. 141, pl. 18, fig. 40.
Shumagin Islands, Alaska, to Puget Sound.

Genus CHAETOPLEURA Shuttleworth, 1853.

CHAETOPLEURA GEMMEA Carpenter, 1892.
Pilsbry, Man., vol. 14, p. 31, pl. 13, figs. 69–74.
Monterey, California, to Magdalena Bay, Lower California.

CHAETOPLEURA BEANII Carpenter, 1857.
Mazatlan Cat., p. 197.—Pilsbry, Man., vol. 14, p. 32.
Unalaska, Alaska, to Mazatlan, Mexico.

CHAETOPLEURA PARALLELA Carpenter, 1864.
Ann. Mag. Nat. Hist., ser. 3, vol. 13, p. 314.—Pilsbry, Man., vol. 14, p. 34. pl. 12, fig. 50.
San Diego, California, to Cape San Lucas, and West Colombia.

CHAETOPLEURA PRASINATA Carpenter, 1864.
Ann. Mag. Nat. Hist., ser. 3, vol. 13, p. 314.—Pilsbry, Man., vol. 14, p. 34,
San Diego, California, to Cape San Lucas.

CHAETOPLEURA LACTICA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 55, No. 2283, p. 509.
Catalina Harbor, California.

Section DENDROCHITON Berry, 1911.

? **CHAETOPLEURA THAMNOPORA** Berry, 1911.
Proc. Acad. Nat. Sci. Phila., p. 487, text figs. 1–7, pl. 40.
Resurrection Bay, Alaska, to San Martin Island, Lower California.

? **CHAETOPLEURA GOTHICA** Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 649.—Pilsbry, Man., vol. 14, p. 74; vol. 15, p. 65, pl. 15, figs. 28, 29.
Monterey to Catalina Island, California.

Genus PALLOCHITON Dall, 187~~8~~. 9/

PALLOCHITON LANUGINOSUS (Carpenter, MS.) Dall, 1879.
Proc. U. S. Nat. Mus., vol. 1, p. 297, pl. 3, fig. 21; vol. 4, 1882, p. 287.—Pilsbry, Man., vol. 14, p. 257, pl. 56, figs. 1–11.
San Diego, California, to San Ignacio Lagoon, Lower California.

Genus CALLISTOCHITON Carpenter, 1882.

CALLISTOCHITON PALMULATUS Carpenter, 1892.
Pilsbry, Man., vol. 14, p. 262, pl. 58, figs. 12–16.
Monterey, California, to San Marco Island, Lower California.

CALLISTOCHITON PALMULATUS MIRABILIS Pilsbry, 1892.
Man., vol. 14, p. 263, pl. 58, figs. 7–11.
San Diego, California. Monterey (Berry)

CALLISTOCHITON CRASSICOSTATUS Pilsbry, 1892.
Man., vol. 14, p. 264, pl. 58, figs. 1–6.
Forrester Island, Alaska, to San Diego, California.

CALLISTOCHITON DECORATUS Carpenter, 1892.
Pilsbry, Man., vol. 14, p. 269, pl. 58, figs. 17–20.
to/ Santa Barbara, California, to San‸Tomas River, Lower California.

CALLISTOCHITON DECORATUS INFORTUNATUS Pilsbry, 1892.
Pilsbry, Man., vol. 14, p. 266, pl. 59, figs. 37–42.
Monterey, California, to Ecuador.

CALLISTOCHITON DECORATUS PUNCTOCOSTATUS Pilsbry, 1896.
Nautilus, vol. 10, No. 5, p. 50.
to/ San Pedro, California, to San‸Tomas River, Lower California.

CALLISTOCHITON ACINATUS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 55, p. 510.
San Pedro, California.

CALLISTOCHITON CELETUS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 55, p. 510.
San Pedro, California.

CALLISTOCHITON AEPYNOTUS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 55, p. 511.
Puget Sound.

CALLISTOCHITON DIEGOENSIS Thiele, 1910.
Zoologica, vol. 22, Heft. 56, pt. 2, p. 86, pl. 9, figs. 4–10.
San Diego, California.

CALLISTOCHITON CYANOSUS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 55, p. 511.
San Pedro, California.

CALLISTOCHITON CHTHONIUS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 55, p. 511.
San Pedro, California.

CALLISTOCHITON FISHERI Dall, 1919.
Proc. U. S. Nat. Mus., vol. 55, p. 512.
Tanaga Island, Aleutians.

Family CHITONIDAE.

Genus CHITON Linnaeus, 1758.

CHITON ALBOLINEATUS Sowerby, 1828.
Zool. Journ., vol. 4, p. 368; Zool. Beechey's Voy., p. 149, pl. 40, fig. 4.
Todos Santos Bay to Guatemala.

San Martin Id. L. Cal. (Baker)

Genus TONICIA Gray, 1847.

TONICIA PUSTULIFERA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 55, p. 516.
San Pedro, California.

Family MOPALIIDAE.

Genus MOPALIA Gray, 1847.

MOPALIA CILIATA Sowerby, 1840.
Ann. Mag. Nat. Hist., p. 289; Conch. Illustr., fig. 79.
Vancouver Island, British Columbia, to Lower California.

MOPALIA CILIATA WOSNESSENSKII Middendorff, 1847.
Bull. Acad. Sci., St. Petersburg, vol. 4, p. 119.—Pilsbry, Man., vol. 14, pl. 64, figs. 69–73.
Unalaska, Alaska, to Santa Rosa Island, California.

MOPALIA CILIATA ELEVATA Pilsbry, 1892.
Man., vol. 14, p. 300, pl. 64, figs. 82, 83.
Forrester Island, Alaska, to Puget Sound.

MOPALIA MUSCOSA Gould, 1846.
Proc. Boston Soc. Nat. Hist., vol. 2, p. 145; Rep. U. S. Expl. Exp., Moll., p. 313, fig. 436.
Shumagin Islands, Alaska, to Rosario, Lower California.

MOPALIA MUSCOSA HINDSII Reeve, 1847.
Conch. Icon., *Chiton*, pl. 12, fig. 67 *a–b*.—Pilsbry, Man., vol. 14, pl. 62, figs. 99, 100.
Sitka, Alaska, to Gulf of California.

MOPALIA MUSCOSA PORIFERA Pilsbry, 1892.
Man., vol. 14, p. 297, pl. 62, figs. 93, 94.
Baulinas Bay, California.

MOPALIA MUSCOSA LAEVIOR Pilsbry, 1918.
Nautilus, vol. ~~2~~1, No. 4, p. 126. 3/
Olympia, Washington.

MOPALIA MUSCOSA ACUTA Carpenter, 1855.
Proc. Zool. Soc., p. 232.—Pilsbry, Man., vol. 14, p. 297, pl. 64, figs. 75–81.
Santa Barbara to San Diego, California.

MOPALIA MUSCOSA LIGNOSA Gould, 1846.
Proc. Boston Soc. Nat. Hist., vol. 2, p. 142.—Pilsbry, Man., vol. 14, p. 299, pl. 63, figs. 58–59.
Sitka, Alaska, to Magdalena Bay, Lower California.

MOPALIA MUSCOSA KENNERLYI Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 648; Proc. Acad. Nat. Sci. Phila., for 1865, p. 59.
Shumagin Islands, Alaska, to Monterey, California.

MOPALIA MUSCOSA SWANII Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 648.
Shumagin Islands, Alaska, to Monterey, California. Prince Wm. Sound, Eyerdam

MOPALIA CIRRATA Berry, 1919.
Lorquinia, Jan., 1919, p. 5.
Dundas Bay, Alaska. (S. S. Berry.)

MOPALIA IMPORCATA Carpenter, 1864.
Suppl. Rep. Brit. Assoc., p. 648.—Pilsbry, Man., vol. 14, p. 301, pl. 62, fig. 98.
Forrester Island, Alaska, to San Pedro, California.

MOPALIA IMPORCATA LIONOTUS Pilsbry, 1918.
Nautilus, vol. 31, No. 4, p. 126.
San Pedro and White's Point, California.

MOPALIA EGRETTA Berry, 1919.
Proc. Cal. Acad. Sci., ser. 4, vol. 9, No. 1, p. 13, pls. 6, 7.
Forrester Island, Alaska, in 20 fathoms.

MOPALIA SINUATA Carpenter, 1864.
Suppl. Rept. Brit., Assoc., p. 648.—Pilsbry, Man., vol. 14, p. 303, pl. 62, figs. 95–97.
Forrester Island to San Francisco, California.

MOPALIA PHORMINX Berry, 1919.
Proc. Cal. Acad. Sci., ser. 4, vol. 9, No. 1, p. 10, pls. 3, 4, 5.
Off Point Pinos, California. (S. S. Berry.)

MOPALIA LOWEI Pilsbry, 1918.
Nautilus, vol. 31, No. 4, p. 125.
San Pedro, California.

MOPALIA HEATHI Pilsbry, 1898.
Proc. Acad. Nat. Sci. Phila., p. 288.
Monterey, California.

MOPALIA CHLORIS Dall, 1919.
Proc. U. S. Nat. Mus., vol. 55, p. 513.
San Diego, California.

MOPALIA CHACEI Berry, 1919.
Lorquinia, Jan., 1919, p. 6.
La Jolla, California. (S. S. Berry.)

MOPALIA GONIURA Dall, 1919.
Proc. U. S. Nat. Mus., vol. 55, p. 513.
Granite Cove, Port Althorp, Alaska, to Puget Sound.

MOPALIA CELETOIDES Dall, 1919.
Proc. U. S. Nat. Mus., vol. 55, p. 514.
Forrester Island, Alaska.

Genus PLACIPHORELLA Carpenter, 1878.

PLACIPHORELLA BOREALIS Pilsbry, 1892.
Man., vol. 14, p. 309, pl. 66, figs. 14–17.
Bering Sea and Island, 283 fathoms; also Kuril Islands.

PLACIPHORELLA VELATA Carpenter, 1878.
Proc. U. S. Nat. Mus., vol. 1, pp. 298, 303, 307; pl. 2, fig. 36.—Pilsbry, Man., vol. 14, p. 306, pl. 66, figs. 6–12.
Trinidad, California, to Todos Santos Bay, Lower California.
Sooke Harbor, Vancouver Id, (Macoun)

For Gray read Middendorff, spring of 1847. Gray, in Annals, Aug. 1847. Gray's group of 1842 is really based on vestitus B.&S.

PLACIPHORELLA RUFA Berry, 1917.
Proc. Cal. Acad. Sci., ser. 4, vol. 7, p. 241, text figs. 3, 4.
Forrester Island, Alaska.

PLACIPHORELLA STIMPSONI Gould, 1859.
Proc. Boston Soc. Nat. Hist., vol. 7, p. 165.—PILSBRY, Man., vol. 14, pl. 62, figs. 84–87.
On the west from Bering Island to Hakodate, Japan. On the east and south to Cerros Island, Lower California.

PLACIPHORELLA PACIFICA Berry, 1919.
Lorquinia, Jan., 1919, p. 6.
Ka~~r~~saän Bay, Alaska, 95 to 98 fathoms. (S. S. Berry.)

Family ACANTHOCHITONIDAE.

Genus ACANTHOCHITONA Gray, 1821.

ACANTHOCHITONA AVICULA Carpenter, 1866. Suppl. Rep. B. A. p. 650
Proc. Cal. Acad. Sci., vol. 3, p. 211.—PILSBRY, Man., vol. 15, p. 24.
Catalina Island, California, to Gulf of California.

ACANTHOCHITONA DIEGOËNSIS Pilsbry, 1893.
Man., vol. 15, p. 25, pl. 12, figs. 52–54.
Catalina Island and Newport to San Diego, California.

Genus KATH~~E~~RINA Gray, 1847.

a/

KATH~~E~~RINA TUNICATA Wood, 1815.

a/

General Conch., p. 11, pl. 2, fig. 1.—PILSBRY, Man., vol. 15, p. 41, pl. 1, figs. 1–11.
Western and southern Bering Sea, to Cooks Inlet, Alaska, and south to Catalina Island, California.

Family CRYPTOCHITONIDAE.

Genus CRYPTOCHITON ~~Gray,~~ 1847.

CRYPTOCHITON STELLERI Middendorff, 1846.
Bull. Acad. Sci. St. Petersburg, vol. 6, p. 116; Mal. Rossica, vol. 1, p. 93, pl. 1–9.
On the west: Bering Island, Kamchatka, the Kuril Islands, and Okhotsk Sea, and south to Hakodate, Japan. On the east, the Aleutian Islands, Cooks Inlet and southward to San Miguel and San Nicolas Islands, California.

Genus CHLAMYDOCHITON Dall, 1878.

CHLAMYDOCHITON AMICULATUS Pallas, 1786.
Nova Acta Acad. Petrop., vol. 2, p. 235, pl. 7, figs. 26–30.
Kuril Islands and Northern Japan on the west, and to the Farallones Islands, California (Newcomb), on the east.

Genus SYMMETROGEPHYRUS (Middendorff, 1848) Chenu, 1859.

SYMMETROGEPHYRUS PALLASII Middendorff, 1846.

Bull. Acad. Sci., St. Petersburg, vol. 6, p. 117; Sibirische Reise, p. 163, pl. 13, figs. 1–9.

Arctic Ocean, Bering and Okhotsk Seas, and eastward to the Shumagin Islands, Alaska.

SYMMETROGEPHYRUS VESTITUS Broderip and Sowerby, 1829.

Zool. Journ., vol. 4, p. 368; Conch. Illustr. *Chiton*, fig. 128.

Arctic Ocean and Bering Sea south to Bering, Pribilof, and Hagmeister Islands. On the Atlantic south to Cape Cod.

Order APLACOPHORA.

Family CHAETODERMATIDAE.

Genus CHAETODERMA Lovèn.

CHAETODERMA ATTENUATUM Heath, 1911.

Mem. Mus. Comp. Zool., vol. 45, No. 1, p. 55, pl. 4, figs. 3, 10, pl. 25; etc.

Off Prince of Wales Island, Alaska, 50 to 200 fathoms.

CHAETODERMA MONTEREYENSE Heath, 1911.

Mem. Mus. Comp. Zool., vol. 45, No. 1, p. 61, pl. 4, figs. 4, 8, 14, 17; pl. 27; etc.

Monterey Bay, 39 to 356 fathoms.

CHAETODERMA ARGENTEUM Heath, 1911.

Mem. Mus. Comp. Zool., vol. 45, No. 1, p. 62, pl. 4, fig. 7; etc.

Near Naha Bay, Alaska, in 82 to 113 fathoms.

CHAETODERMA ERUDITUM Heath, 1911.

Mem. Mus. Comp. Zool., vol. 45, No. 1, p. 59, pl. 4, figs. 9, 11; etc.

Lynn Canal and Chatham Strait, Alaska, in 282 to 313 fathoms.

CHAETODERMA CALIFORNICUM Heath, 1911.

Mem. Mus. Comp. Zool., vol. 45, No. 1, p. 64, pl. 4, fig. 6; etc.

Off North Coronado Island, California, in 618 to 667 fathoms.

CHAETODERMA ROBUSTUM Heath, 1911.

Mem. Mus. Comp. Zool., vol. 45, No. 1, p. 68, pl. 4, fig. 5; etc.

South of Alaska Peninsula, in 483 fathoms.

CHAETODERMA SCABRUM Heath, 1911.

Mem. Mus. Comp. Zool., vol. 45, No. 1, p. 63, pl. 4, figs. 2, 16; etc.

Monterey Bay, in 795 to 871 fathoms.

CHAETODERMA NANULUM Heath, 1911.

Mem. Mus. Comp. Zool., vol. 45, No. 1, p. 66, pl. 4, figs. 1, 12; etc.

Off San Diego, California, in 260 to 284 fathoms.

Genus LIMIFOSSOR Heath, 1904.

LIMIFOSSOR TALPOIDEUS Heath, 1904.

Zool. Anz., vol. 5, p. 28; Mem. Mus. Comp. Zool., vol. 45, No. 1, p. 69, pl. 21, figs. 7–13.

Lynn Canal and Chatham Strait, Alaska, in 282 to 313 fathoms.

LIMIFOSSOR FRATULA Heath, 1911.
Mem. Mus. Comp. Zool., vol. 45, No. 1, p. 72, pl. 2, fig. 6; etc.
Off Point Loma, California, in 120 to 284 fathoms.

Family LEPIDOMENIIDAE.

Genus NEMATOMENIA Simroth, 1893.

NEMATOMENIA PLATYPODA Heath, 1911.
Mem. Mus. Comp. Zool., vol. 45, No. 1, p. 151, pl. 1, fig. 4, etc.
Off Agattu Island, Aleutians, in 482 fathoms.

Genus HEATHIA Thiele, 1913.

HEATHIA POROSA Heath, 1911.
Mem. Mus. Comp. Zool., vol. 45, No. 1, p. 159, pl. 3, fig. 4, etc.
Off San Diego, California, in 500 to 542 fathoms.

Genus DONDERSIA Hubrecht, 1888.

DONDERSIA CALIFORNICA Heath, 1911.
Mem. Mus. Comp. Zool., vol. 45, No. 1, p. 155, pl. 3, fig. 9; etc.
Off San Diego, California, in 21 fathoms.

Family NEOMENIIDAE.

Genus PACHYMENIA Heath, 1911.

PACHYMENIA ABYSSORUM Heath, 1911.
Mem. Mus. Comp. Zool., vol. 45, No. 1, p. 72, pl. 38, fig. 11; pl. 39, figs. 1-4, etc.
Off Southern California, in 2,196 to 2,228 fathoms.

Genus ALEXANDROMENIA Heath, 1911.

ALEXANDROMENIA VALIDA Heath, 1911.
Mem. Mus. Comp. Zool., vol. 45, No. 1, p. 142, pl. 3, fig. 6, etc.
Off Southern California, in 603 to 1,350 fathoms.

Family PRONEOMENIIDAE.

Genus DORYMENIA Heath, 1911.

DORYMENIA ACUTA Heath, 1911.
Mem. Mus. Comp. Zool., vol. 45, No. 1, p. 95, pl. 3, fig. 11, etc.
Off Southern California, in 302 to 638 fathoms.

SYNONYMIC NOTES.

Acanthochites, see *Acanthochitona.*
Admete viridula, see *A. couthouyi* Jay.
Alexia, see *Phytia.*
Alvania grippiana, see *aequisculpta.*
Amicula, see *Symmetrogephyrus.*
Amphissa corrugata, see *columbiana.*
Anachis petravis, see *subturrita.*
Anachis tincta, see *Mangilia lineolata.*
Angulus obtusus, see *Oudardia buttoni.*
Anomia lampe, see *A. peruviana.*
Antiplanes smithi Arnold, not Forbes, see *A. rotula.*
Assiminea, see *Syncera.*
Astyris variegata, see *hypodra.*
Aulacofusus, section, type, *Fusus spitsbergensis* Reeve.
Avicula, see *Pteria.*
Bela, see *Lora.*
Bela schmidti, see *Lora harpa.*
Bela tenuilirata Krause, not Dall, see *Lora lawrenciana.*
Bittium barbarense, see *B. asperum.*
Bittium esuriens, see *B. attenuatum.*
Bittium filosum, see *B. eschrichtii.*
Boreotrophon, see *Neptunea.*
Boreotrophon gracilis Carpenter, see *N. multicostata* Eschscholtz.
Boreotrophon gunneri Carpenter, see *N. multicostata* Eschscholtz.
Boreotrophon lamellosus Gray, see *N. cepula.*
Boreotrophon multicostatus Arnold, see *N. pacifica.*
Boreotrophon scalariformis Carpenter, see *N. pacifica.*
Boreotrophon subserratus Sowerby, see *N. tenuisculpta* Carpenter.
Buccinum tricarinatum, see *triplostephanum.*
Bulla nebulosa Gould, see *Bullaria gouldiana* Pilsbry.
Cadulus simplex, see *C. stearnsii.*
Cerithiopsis fortior, see *Bittium interfossa.*
Cerithium incisum, see *C. sculptum.*
Cerostoma, see *Purpura.*
Chorus Carpenter, not Gray, see *Forreria.*
Chrysallida pumila Carpenter, see *Besla callimorpha.*
Chrysodomus fornicatus Gmelin, 1792, see *solutus* Hermann, 1781.
Chrysodomus heros Gray, 1850, see *solutus* Hermann, 1781.
Cithna, see *Cythna.*
Clathurella, see *Philbertia.*
Clathurella lowei, see *Philbertia crystallina.*
Cleodora, see *Clio.*
Clistaxis, see *Brocktonia.*
Closia, see *Merovia.*
Cumingia californica, see *C. lamellosa.*
Dentalium columbianum, see *pretiosum.*
Dentalium hexagonum, see *neohexagonum.*
Dentalium indianorum, see *pretiosum.*

Donax laevigata Desh, not Gmelin, + obesus Gould,
= D. gouldii Dall, 1919.

Epitōnium montereyense Dall. 1917, not 1907 = E.
regiomontānum p. 116. 1921.

Drillia, see *Cymatosyrinx* and *Clathrodrillia.*
Drillia inermis, see *ophioderma.*
Drillia cancellata, see *rhines.*
Eucosmia, see *Eulithidium.*
Eulima, see *Melanella.*
Euthria, see *Searlesia.*
Fissuridea, see *Diadora.*
Fusus, see *Fusinus.*
Fusus robustus Trask, see *F. monksae* Dall.
Fusus rugosus Trask, see *F. traski* Dall.
Gibbula, see also *Lirularia.*
Glyphis, see *Diadora.*
Gyrodisca, see *Megalomphalus.*
Harfordia, new section, type, *Fusus harfordi* Stearns.
Hydrobia, see *Cingula.*
Isapis, see *Iselica.*
Jeffreysia, see *Rissoella.*
Limacina, see *Spiratella.*
Limatofusus, new section, type *Aulacofusus tahwitanus* Dall.
Liostraca, see *Strombiformis.*
Littorina grandis, see *squalida.*
Lucapina, see *Megathura.*
Lunatia, see *Euspira.*
Macrochasma, see *Megathura.*
Macromphalina, see *Megalomphalus.*
Mangilia funebrale, see *M. levidensis.*
Mangilia nitens Carpenter, not Sowerby, see *pulchrior.*
Margarita, see *Margarites.*
Margarita inflata Carpenter, 1864, see *inflatula.*
Margarita inflata Carpenter, 1865, see *rhodia.*
Maugerella, see *Stenoradsia.*
Mitra nodoso-cancellata, see *M. solitaria.*
Modiolaria, see *Musculus.*
Monoceros, see *Acanthina.*
Monoceros engonatum, see *Acanthina spirata.*
Murex californica, see *erinaceoides.*
Murex incisa, see *Triremis gemma.*
Murex painei, see *Tritonalia.*
Mysella, see *Rochefortia.*
Mytilus hamatus, see *recurvus.*
Nacella, see *Rhodopetala.*
Nettastomella darwini, see *N. rostrata.*
Nitidella dalli E. A. Smith, see *gouldii* Carpenter.
Nuttallina scabra, see *N. fluxa.*
Ocinebra, see *Tritonalia.*
Odostomia tenuis, see *Evalea io.*
Oedalina, see *Cooperella.*
Olivella intorta, see *O. pedroana* Conrad.
Onchidella, see *Arctonchis.*
Opalia borealis, see *wroblewskii.*
Pachydesma crassatelloides, see *P. stultorum.*
Panomya norvegica, see *P. arctica.*
Pectunculus, see *Glycymeris.*

Phorcus, see *Promartynia*.

Pinna, see *Atrina*.

Pristiphora, see *Serridens*.

Purpura Lamarck not Martyn, see *Nucella*.

Purpura crispata, see *Nucella lamellosa*.

Purpura decemcostata, see *Nucella canaliculata*.

Purpura lactuca, see *Nucella lamellosa*.

Purpura saxicola, see *Nucella emarginata*.

Pterorytis, see *Purpura*.

Retusa Brown, type *Bulla obtusa* Montagu.

Rissoa cooperi Tryon, see *Barleeia subtenuis*.

Rissoa interfossa, see *Bittium*.

Rupellaria, see *Venerupis*.

Scala and Scalaria, see *Epitonium*.

Scalaria hindsii, see *Epitonium fallaciosum*.

Scrobs, see *Amphithalamus*.

Sigaretus, see *Sinum*.

Siphonalia fuscotincta Carpenter,=*Amphissa sp*. jun.?

Skenea, see *Skeneopsis*.

Styliferina, see *Alabina*.

Stylopsis, see *Graphis*.

Subemarginula, see *Hemitoma*.

Sulcularia, new section, type, *Retusa sulcata* Orbigny (as *Bulla*).

Surculina, see *Phenacoptygma*.

Tapes, see *Protothaca*.

Tegula coronulata, see *mariana*.

Tegula fuscescens, see *ligulata*.

Terebra simplex Carpenter 1865, not Conrad, 1830, see *T. pedroana*.

Tornatina, see *Acteocina*.

Tornatina cerealis=*Acteocina culcitella* junior.

Trachydermon, see *Lepidochitona*.

Trachydermon pseudodentiens, see *L. dentiens*.

Trichotropis borealis not of Broderip and Sowerby, see *T. costellata* Couthouy.

Trochiscus, see *Norrisia*.

Trophon muricata Hinds, see *Coralliophila hindsii* Carpenter.

Trophon muriciformis, see *Neptunea dalli*.

Turritella polaris, see *T. erosus*.

Vermetus, see *Vermicularia*.

Vermetus fewkesii Yates, see *V. eburnea* junior.

Volutella, see *Merovia*.

Volvarina, see *Hyalina*.

Volvarina varia, see *Hyalina californica*.

Volvula, see *Volvulella*.

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Figures 1 and 3 drawn by Miss Evelyn Mitchell, the others by the late Doctor J. C. McConnell.

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Figures 5 and 9 drawn by the late Doctor J. C. McConnell, the others by Miss Evelyn Mitchell.

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All these figures drawn by Miss Evelyn Mitchell.

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Figures 6, 7, and 9 drawn by the late Doctor J. C. McConnell, the others by Miss Evelyn Mitchell.

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Figures 5 and 11 drawn by Miss Evelyn Mitchell, the others by the late Doctor J. C. McConnell.

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Figures 1, 3, 4, and 6, were drawn by the late Doctor J. C. McConnell, the others by Miss Evelyn Mitchell.

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Figures 1, 2, and 7 were drawn by the late Doctor J. C. McConnell; the others by Miss Evelyn Mitchell.

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All these figures drawn by Doctor J. C. McConnell.

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Figures 13 and 14 were drawn by Miss Evelyn Mitchell; the others by the late Doctor J. C. McConnell.

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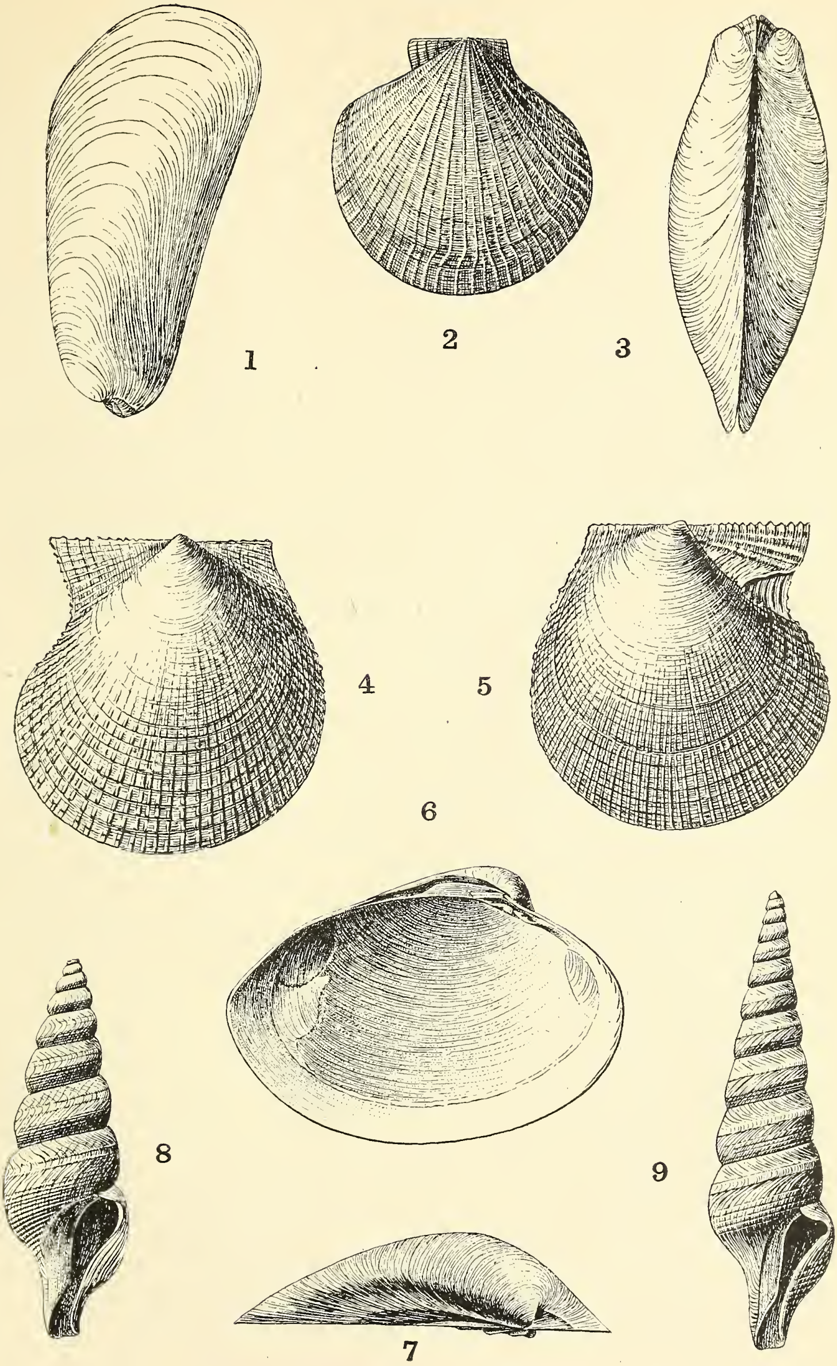
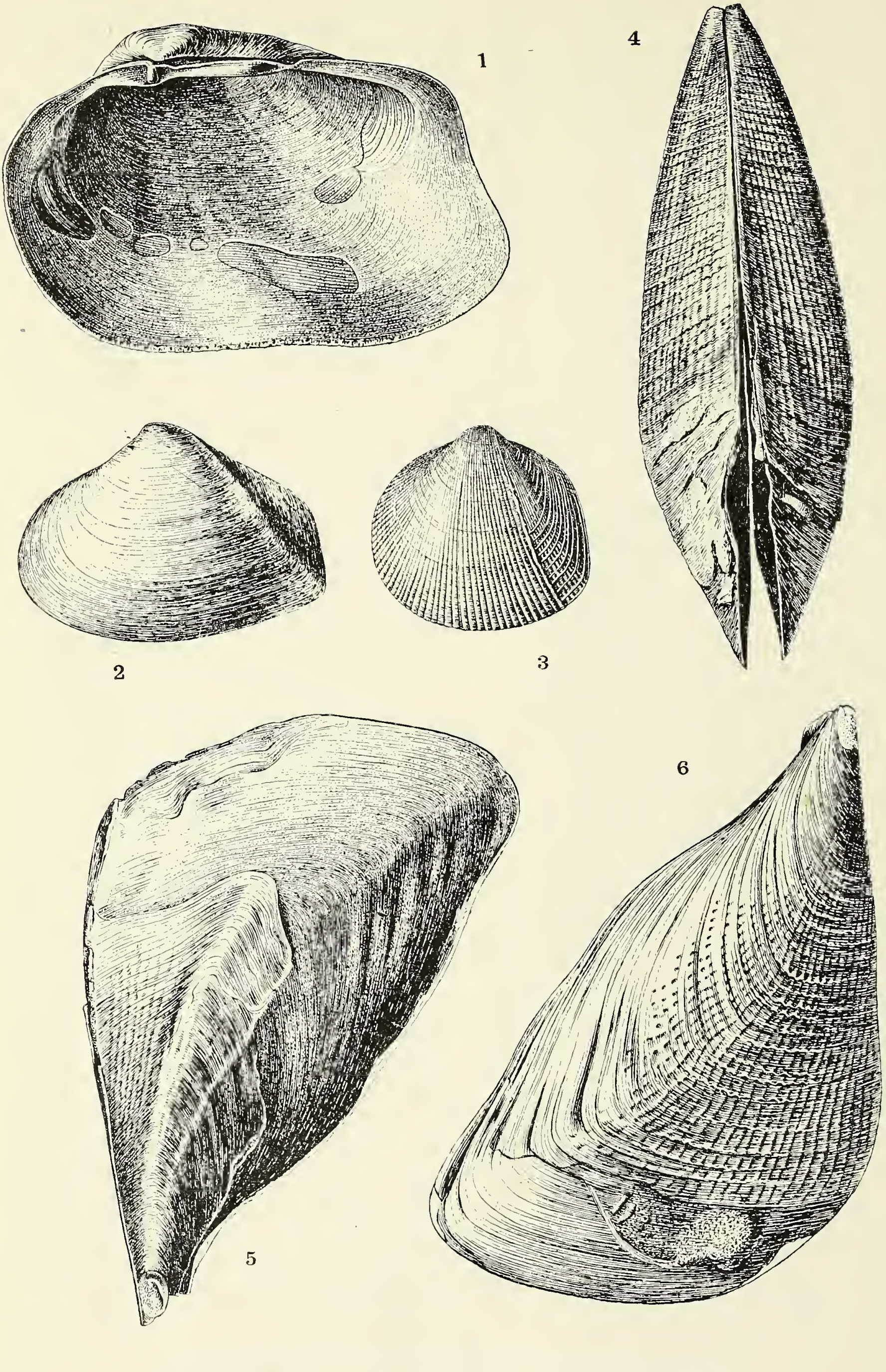


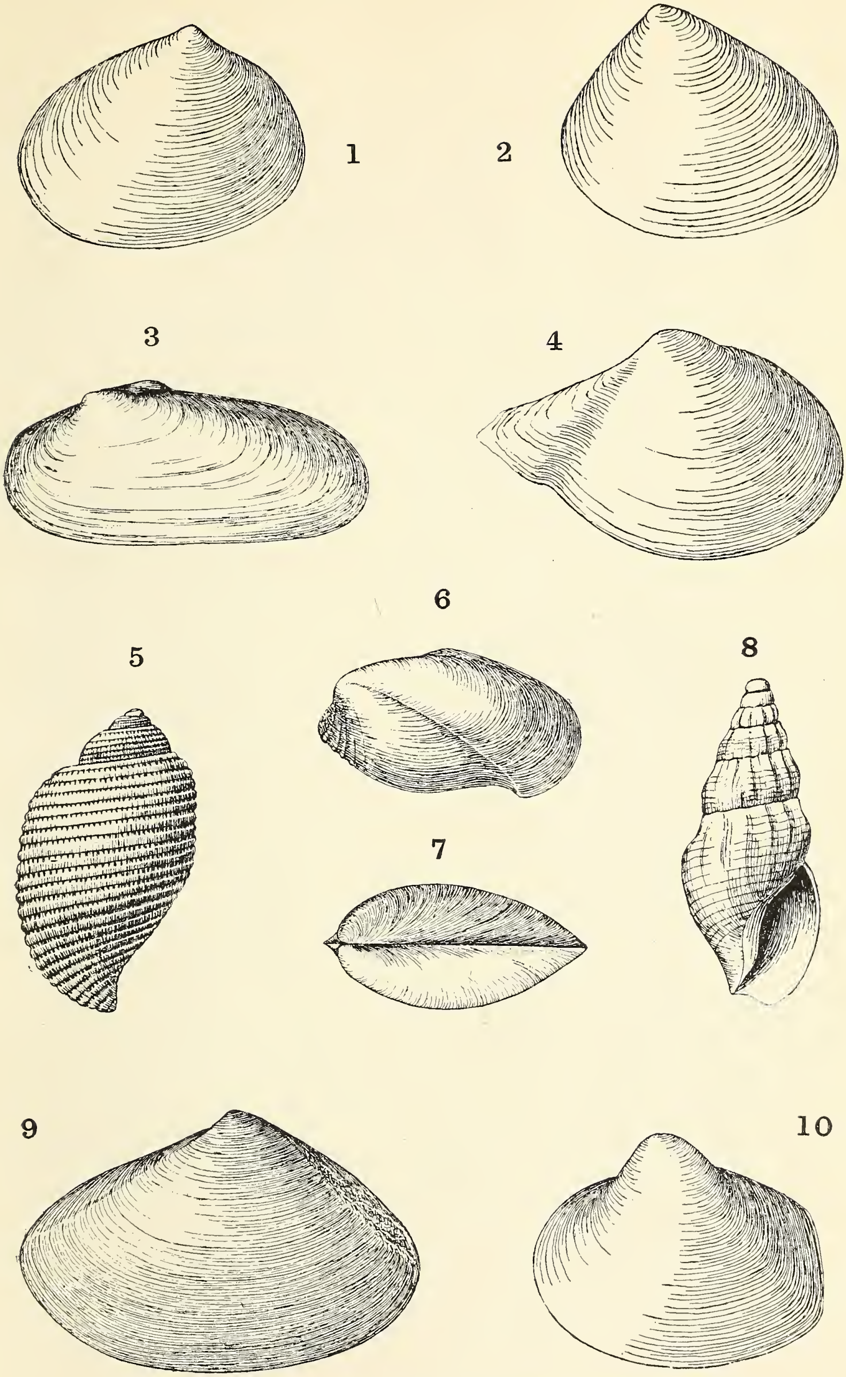
NORTHWEST AMERICAN SHELL-BEARING MOLLUSKS.

FOR EXPLANATION OF PLATE SEE PAGE 213.



Northwest American Shell-Bearing Mollusks.

For explanation of plate see page 213.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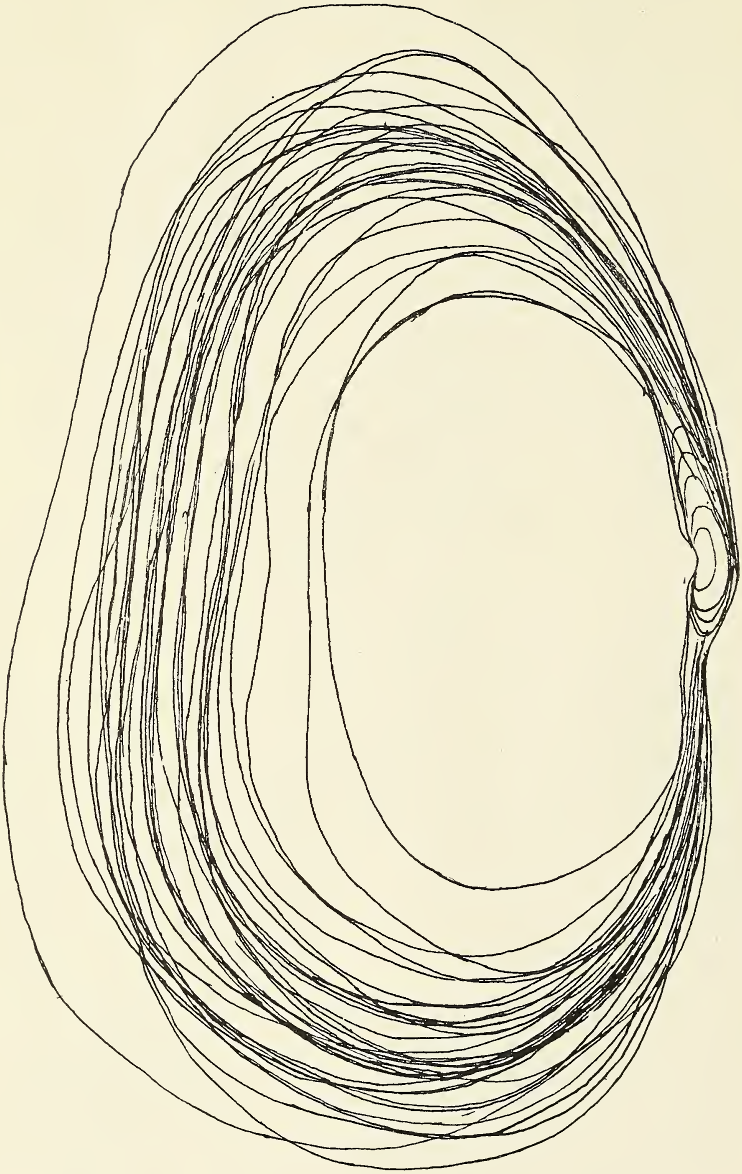
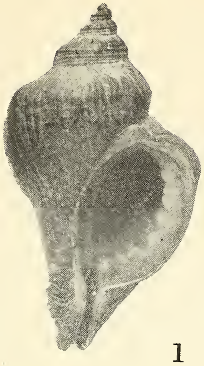
Northwest American Shell-Bearing Mollusks.

For explanation of plate see page 213.



NORTHWEST AMERICAN SHELL-BEARING MOLLUSKS.

MYA INTERMEDIA DALL, SEE PAGE 213.



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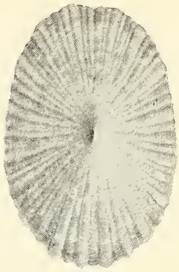

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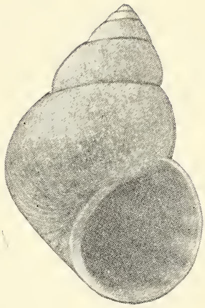

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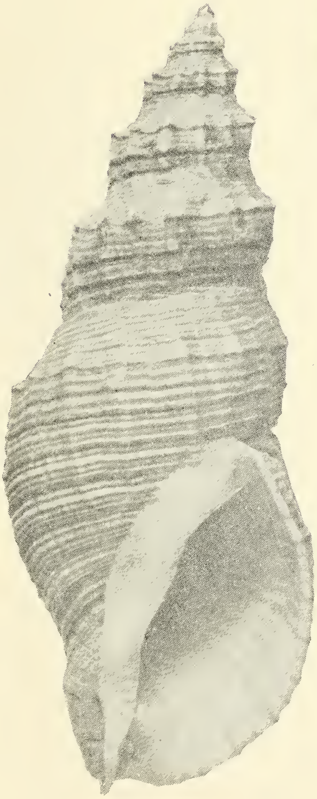

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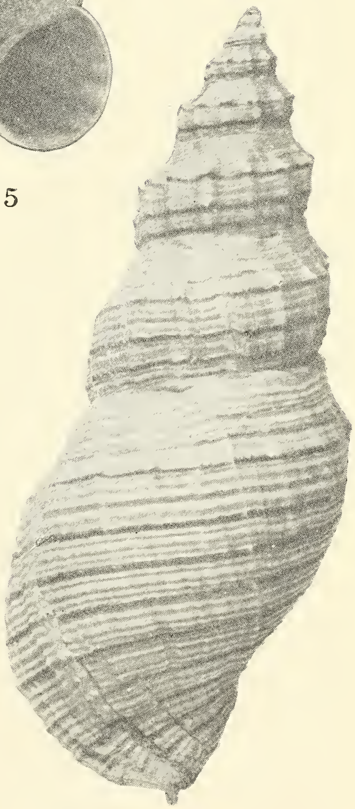

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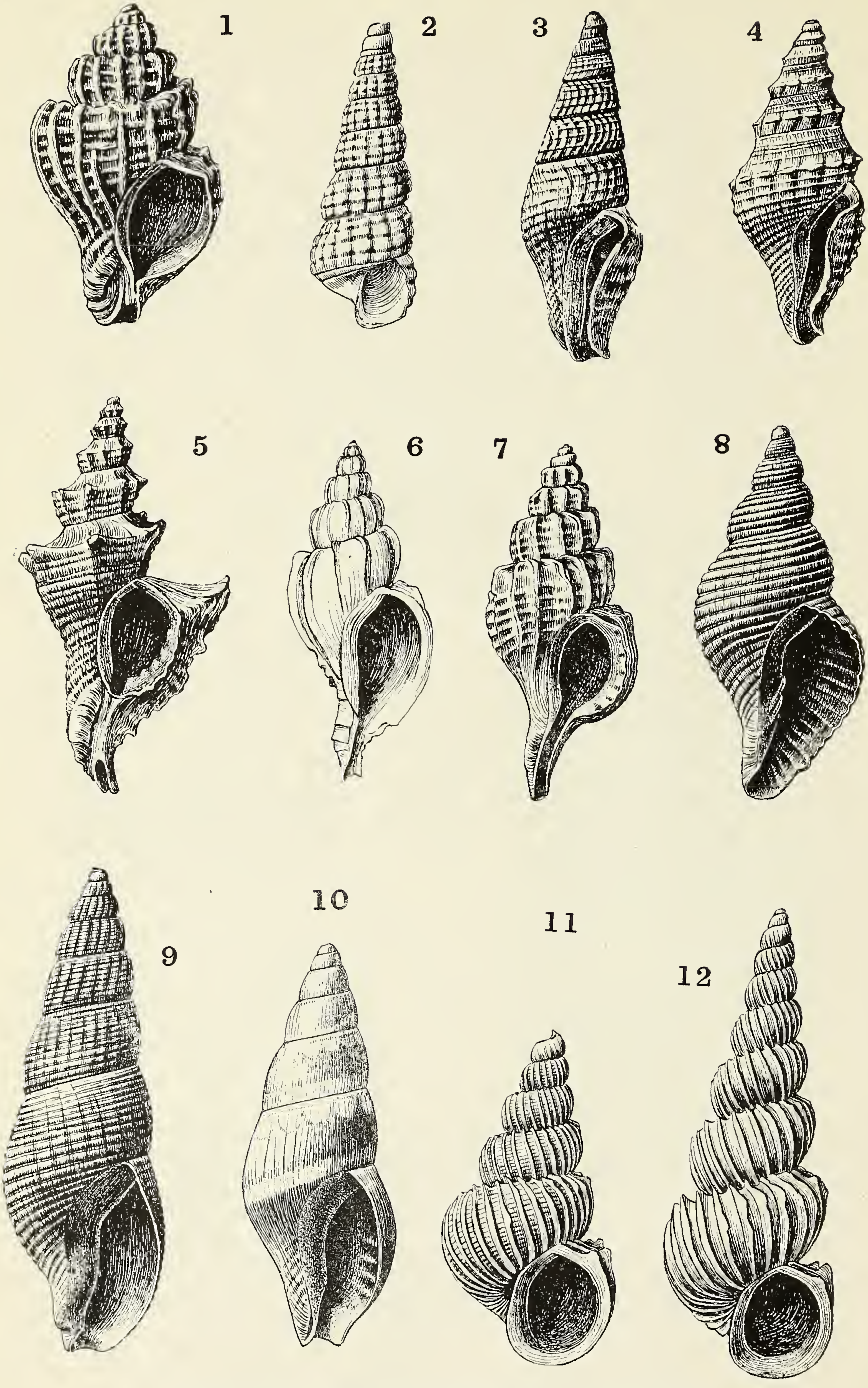
NORTHWEST AMERICAN SHELL-BEARING MOLLUSKS.

FOR EXPLANATION OF PLATE SEE PAGE 213.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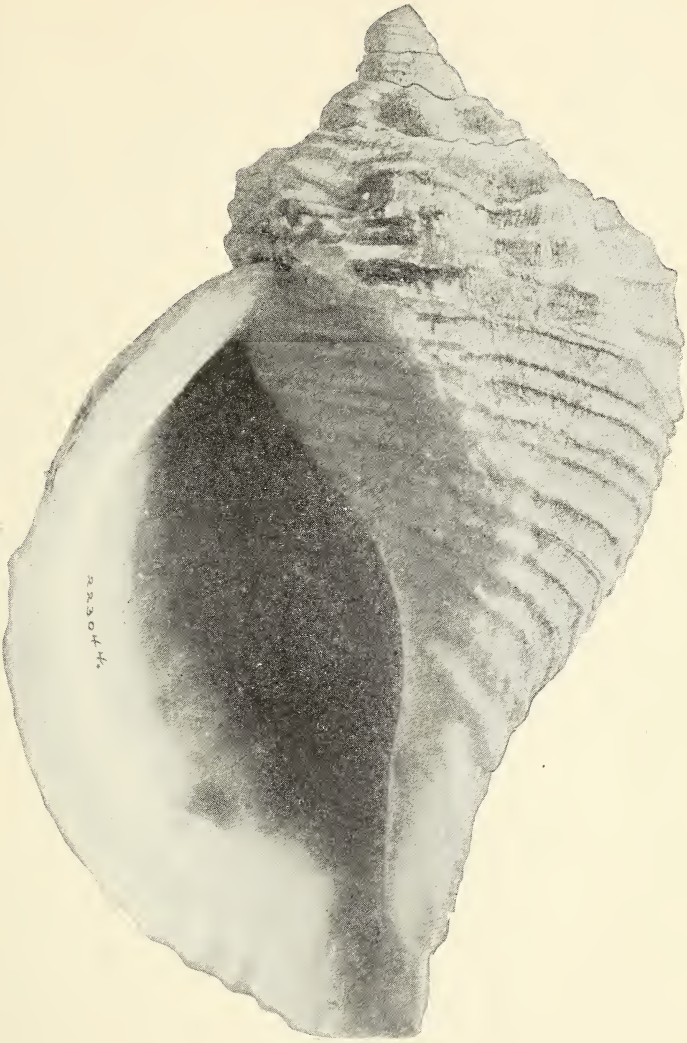
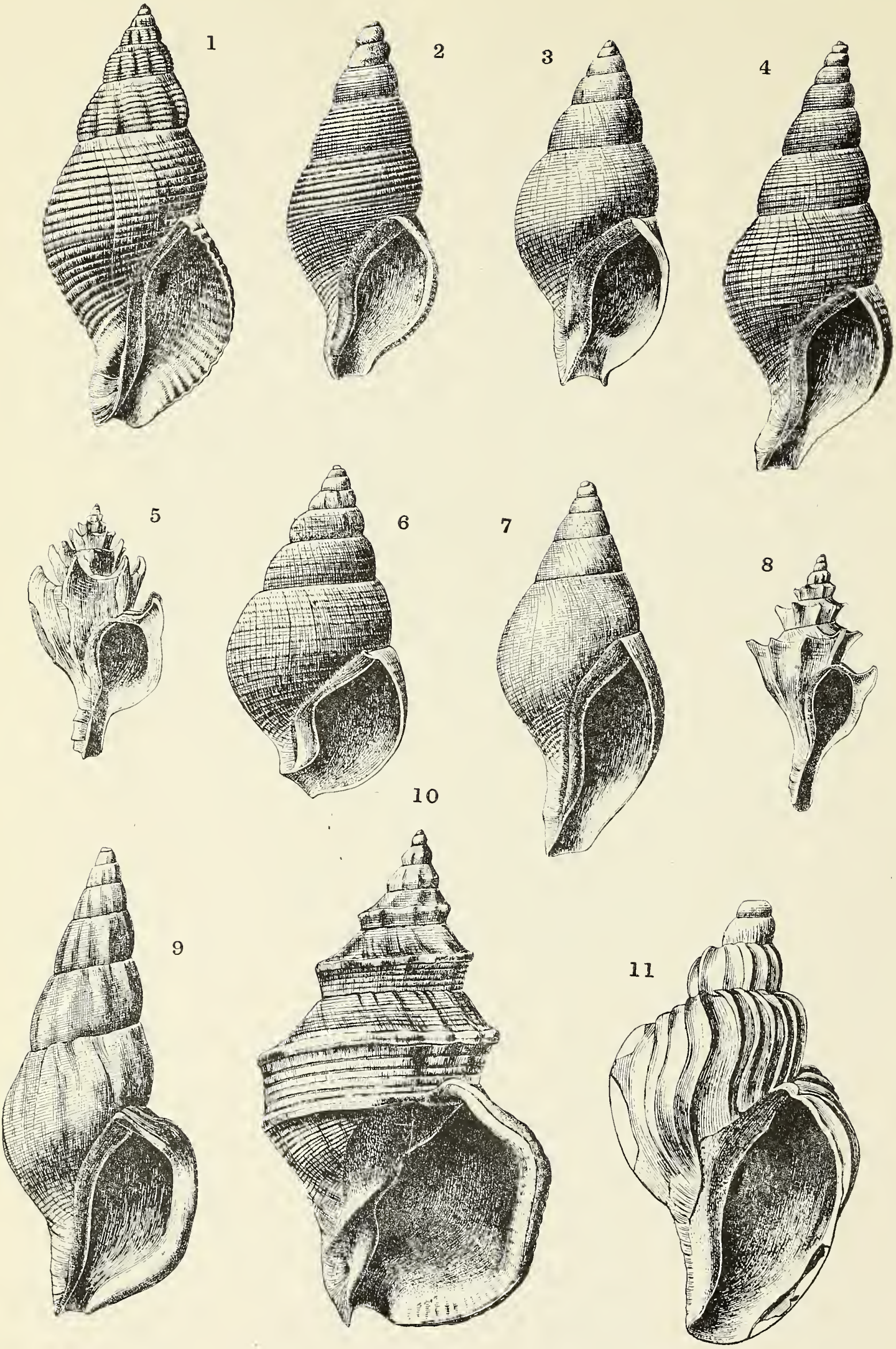
NORTHWEST AMERICAN SHELL-BEARING MOLLUSKS.

FOR EXPLANATION OF PLATE SEE PAGE 214.



Northwest American Shell-Bearing Mollusks.

Pyrulofusus harpa Morch, see page 214.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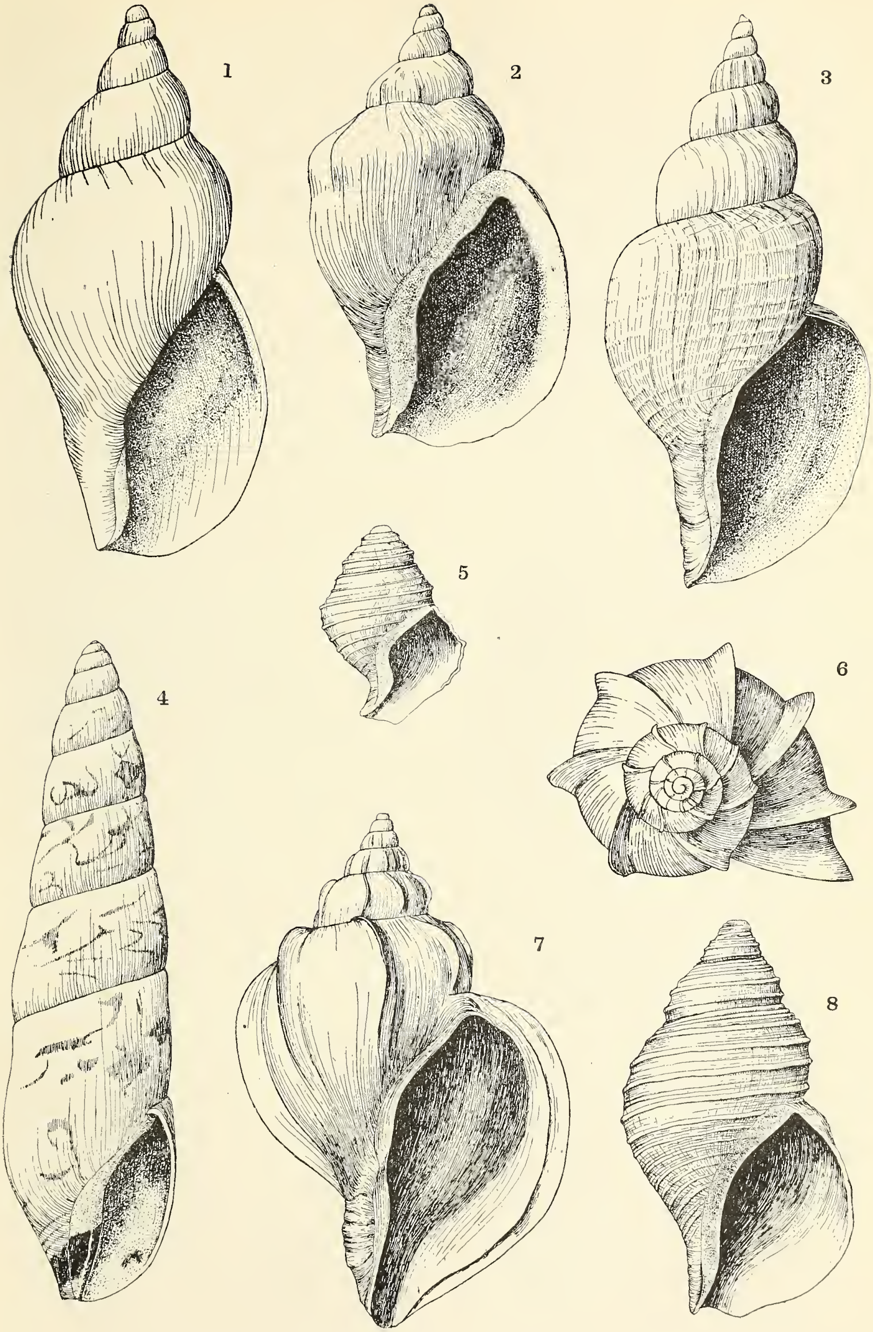
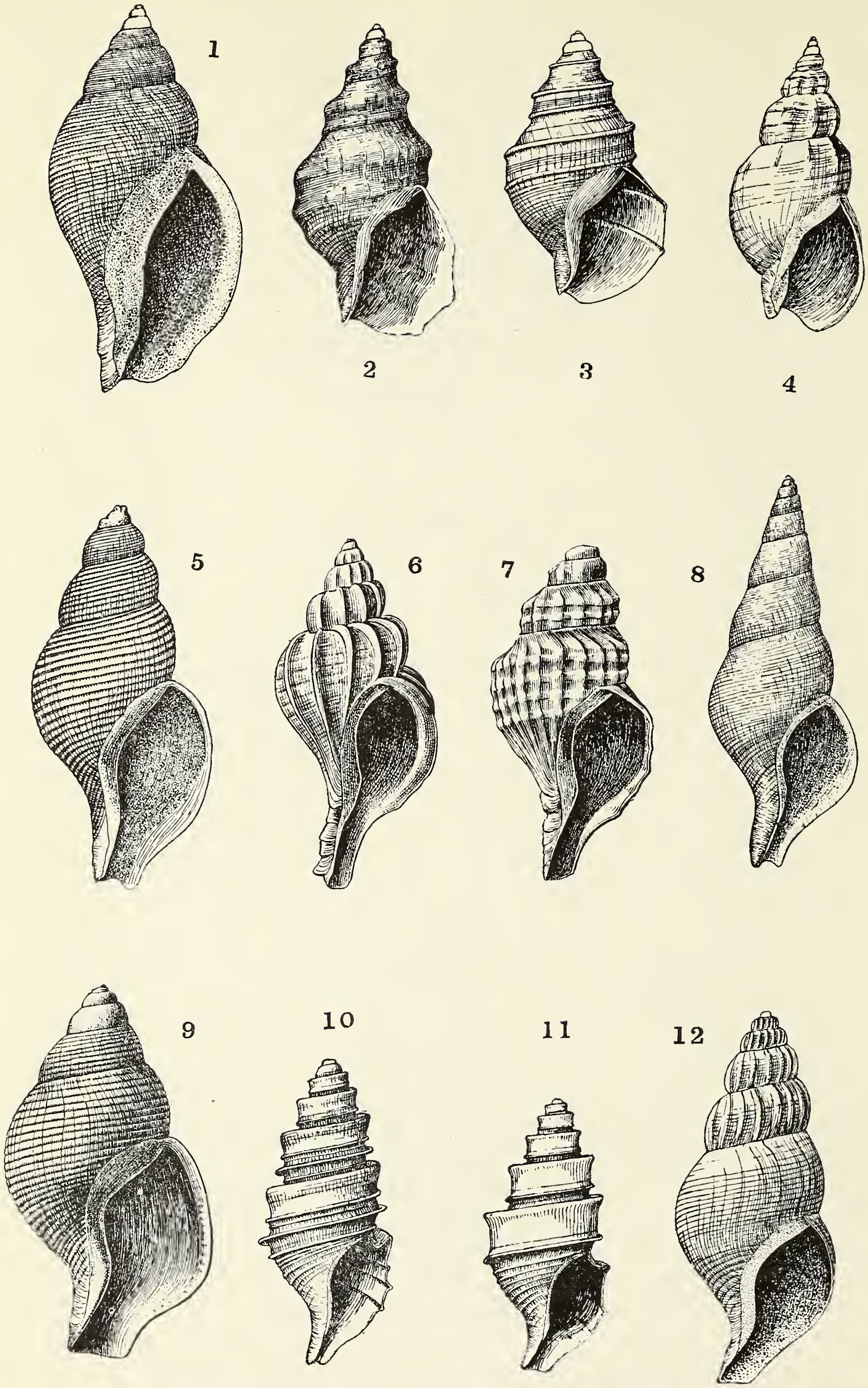
NORTHWEST AMERICAN SHELL-BEARING MOLLUSKS.

FOR EXPLANATION OF PLATE SEE PAGE 214.



Northwest American Shell-Bearing Mollusks.

For explanation of plate see page 214.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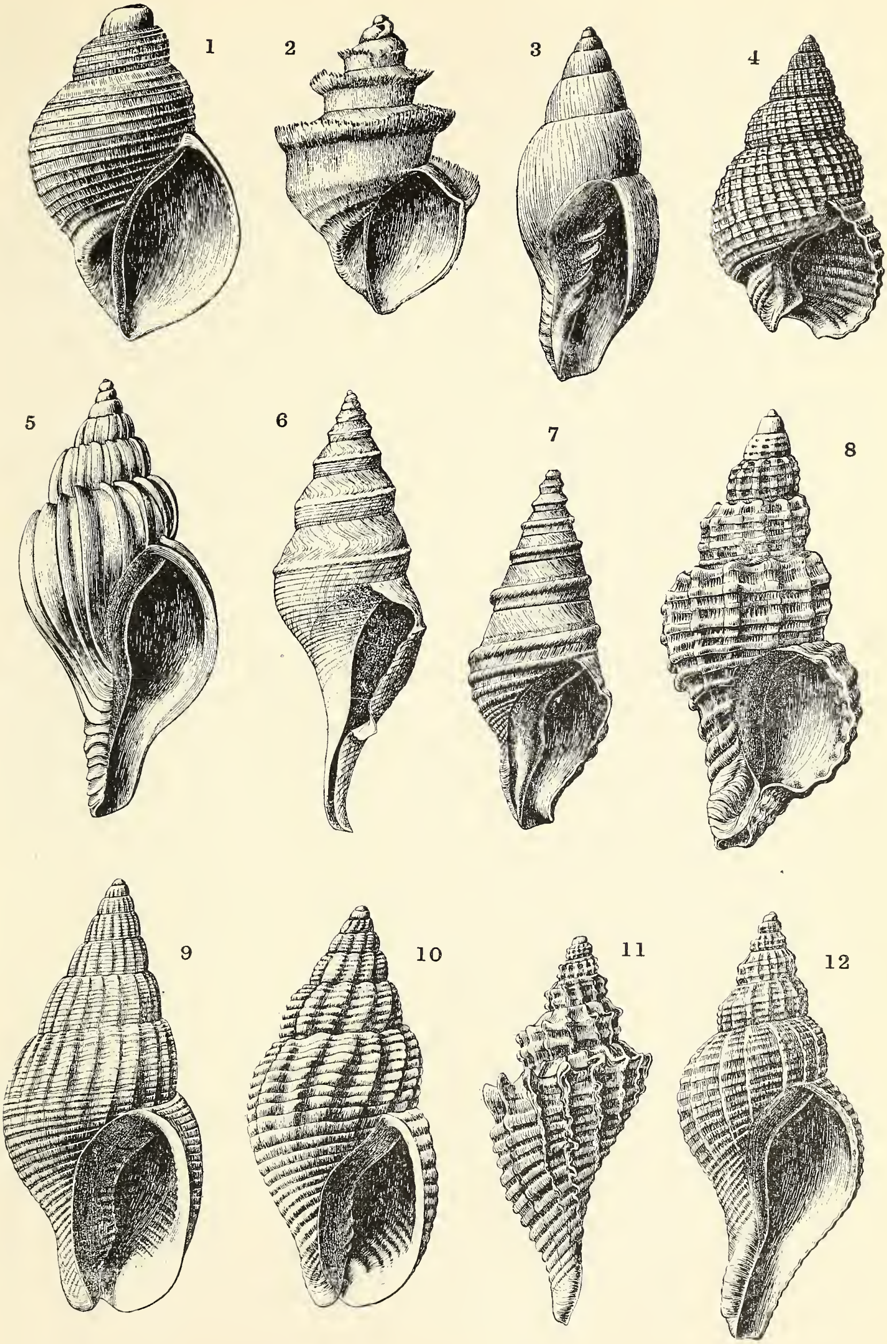
Northwest American Shell-Bearing Mollusks.

For explanation of plate see pages 214 and 215.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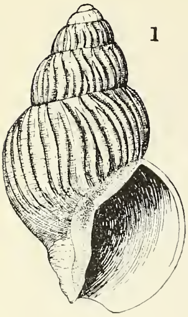
Northwest American Shell-Bearing Mollusks.

For explanation of plate see page 215.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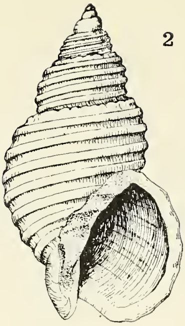
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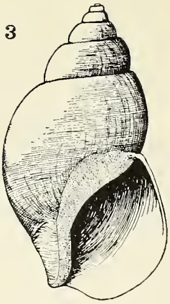

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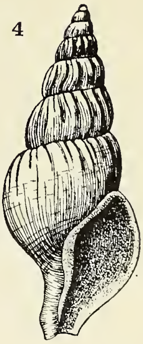

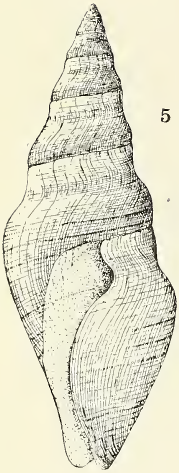
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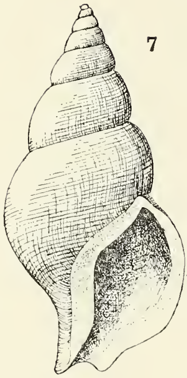
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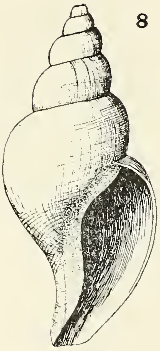
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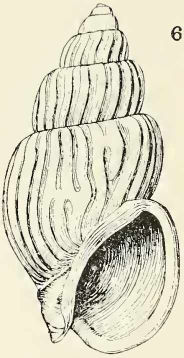
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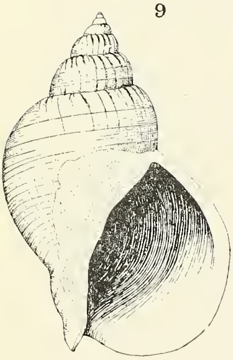

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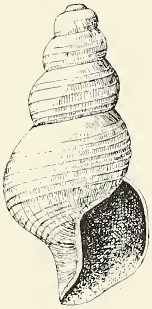

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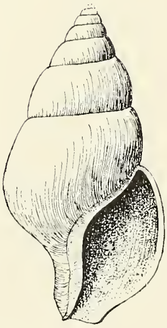

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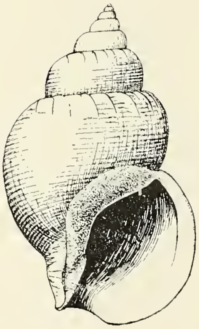
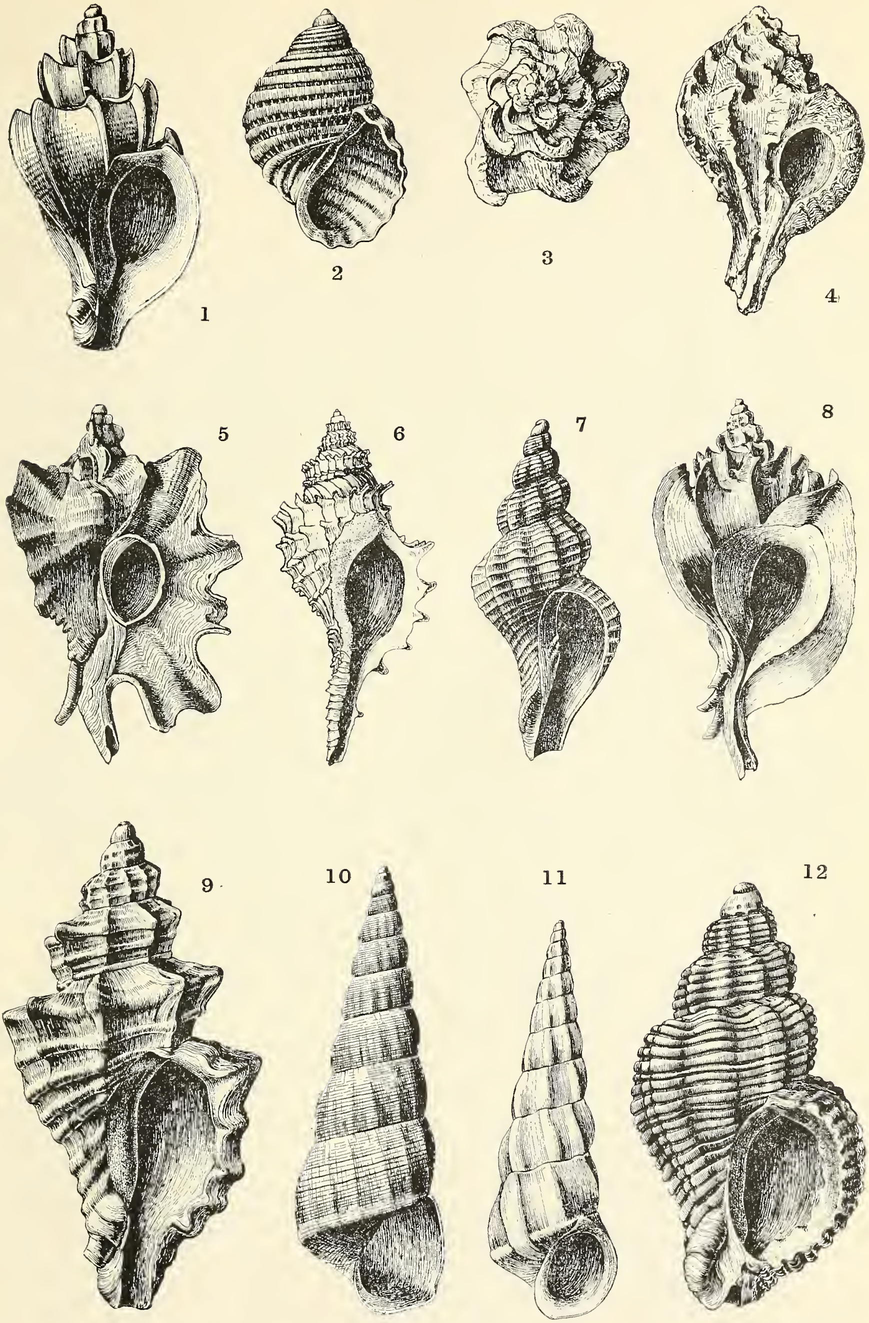


Northwest American Shell-Bearing Mollusks.

For explanation of plate see page 215.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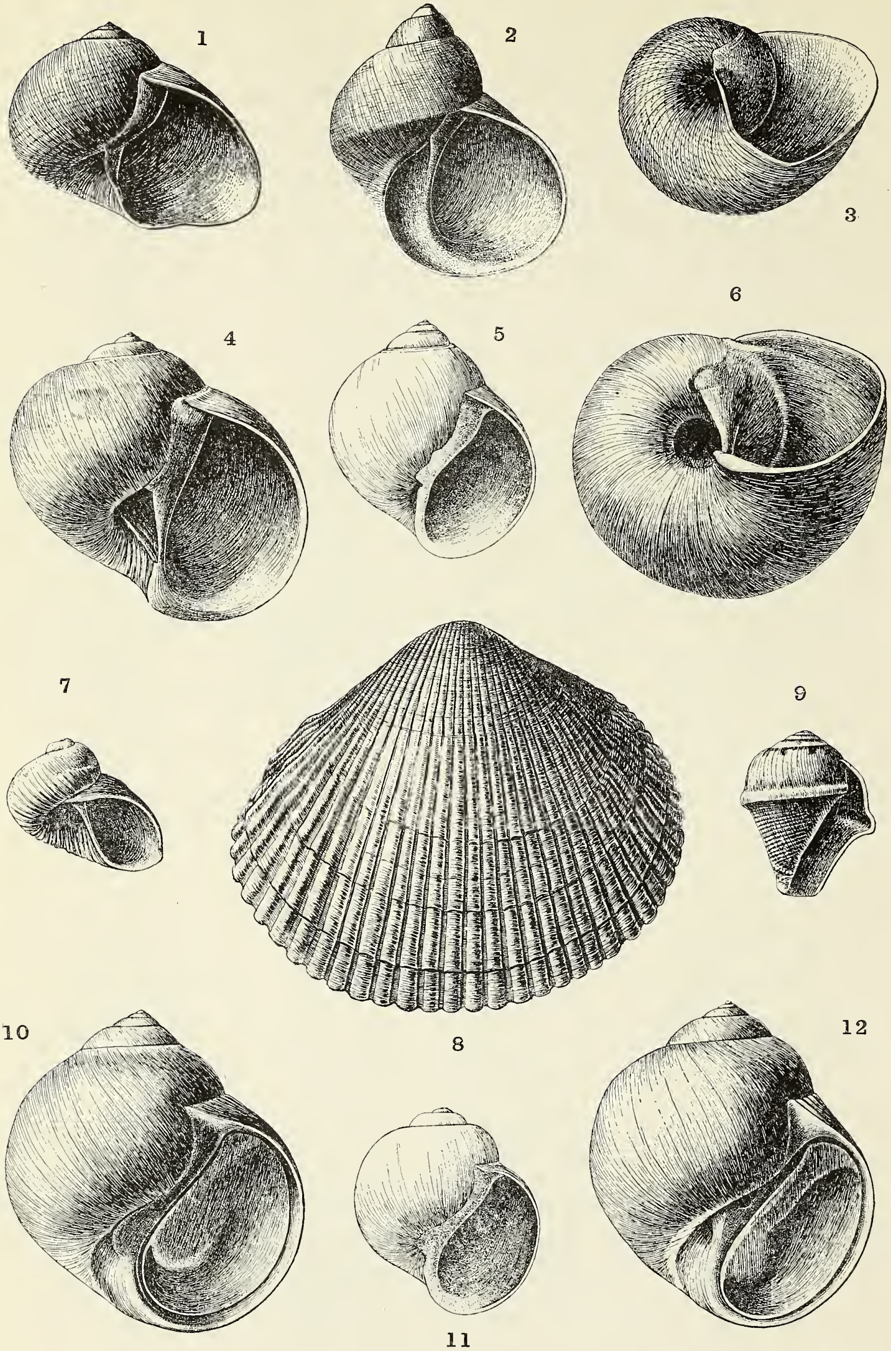
Northwest American Shell-Bearing Mollusks.

For explanation of plate see page 215.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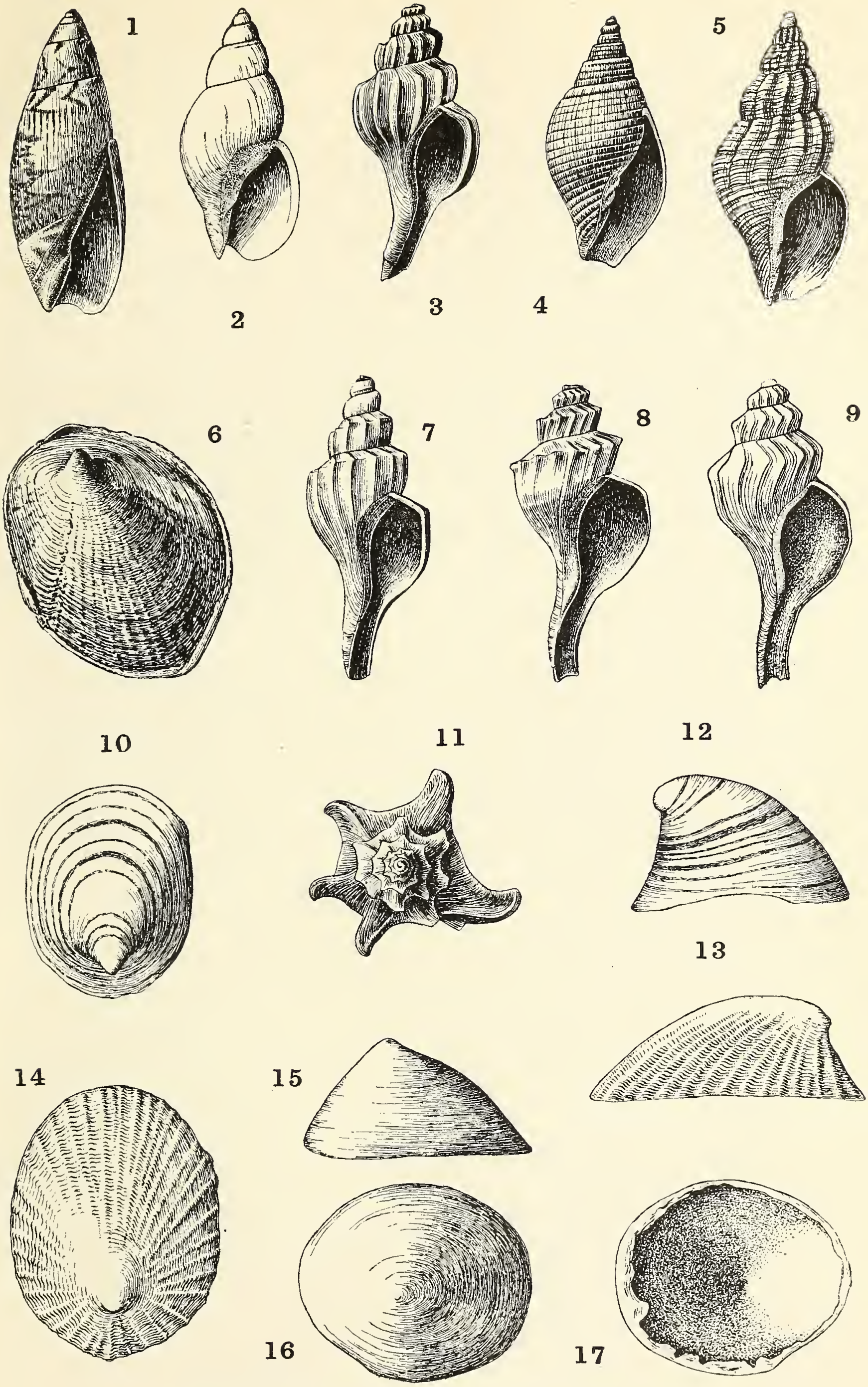
Northwest American Shell-Bearing Mollusks.

For explanation of plate see page 216.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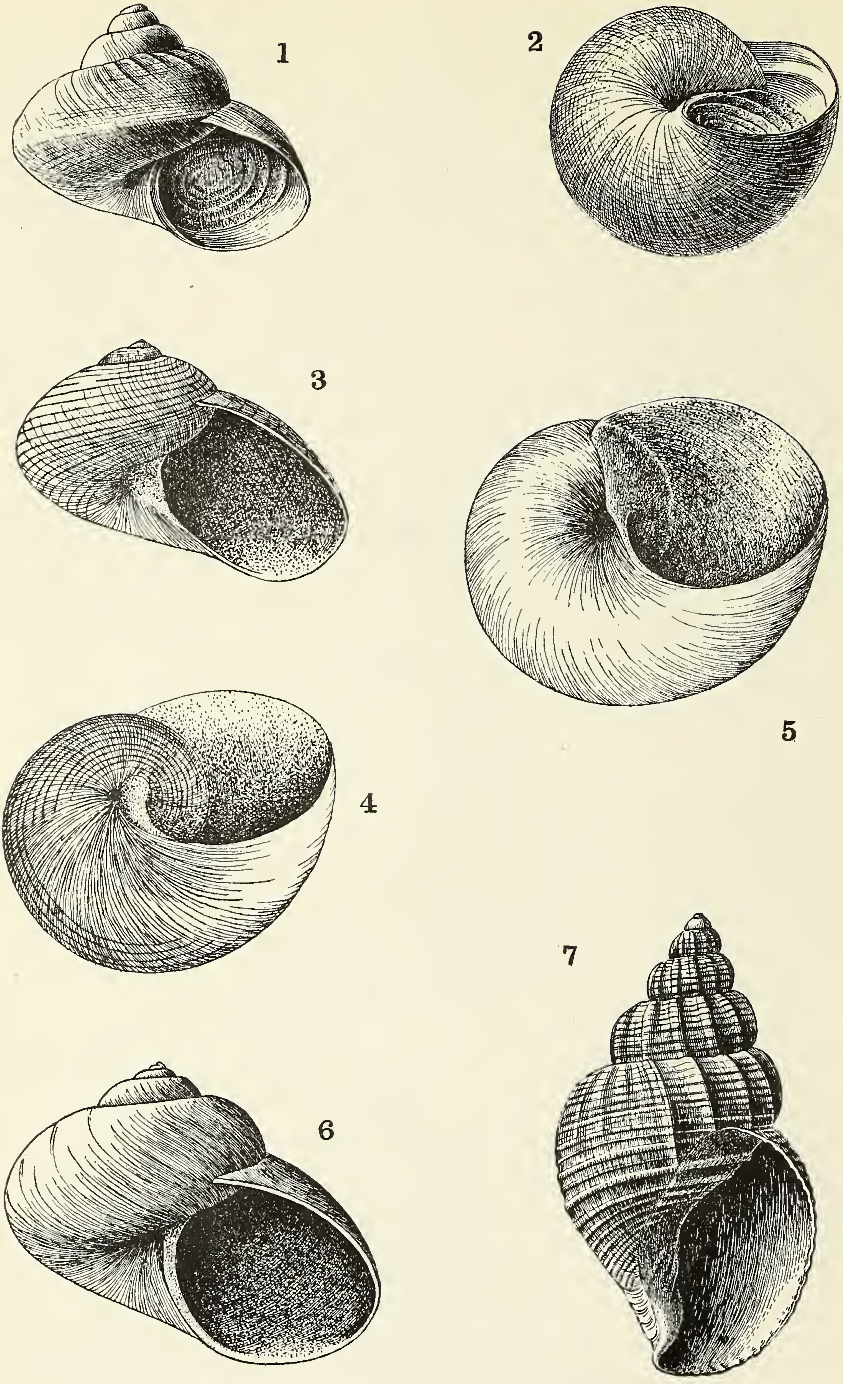
Northwest American Shell-Bearing Mollusks.

For explanation of plate see page 216.



Northwest American Shell-Bearing Mollusks.

For explanation of plate see page 216.

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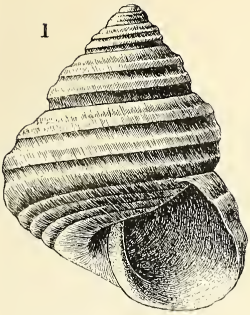

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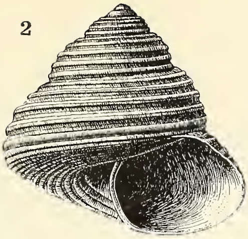

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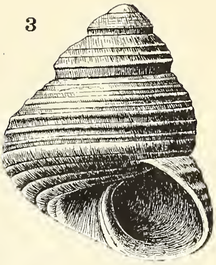

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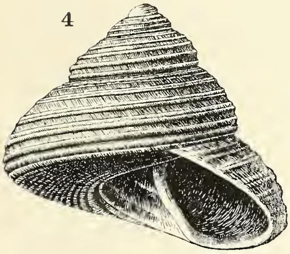

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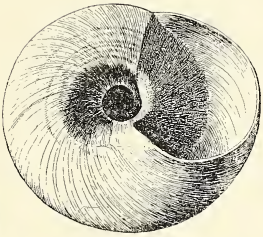

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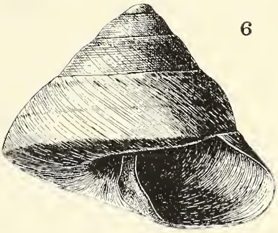

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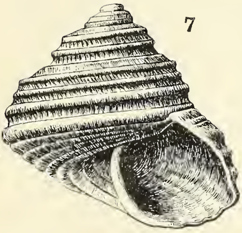

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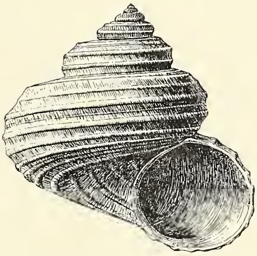

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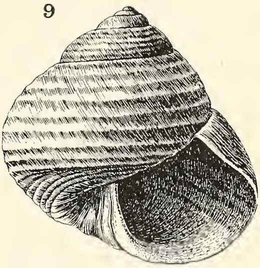

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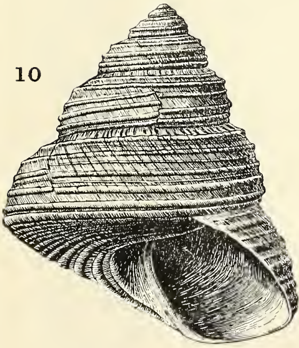

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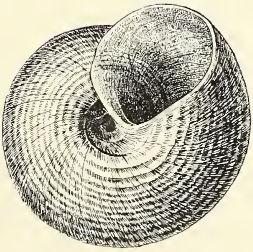

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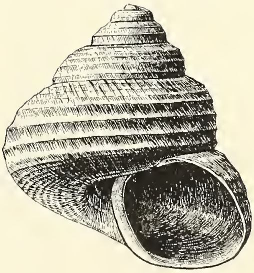
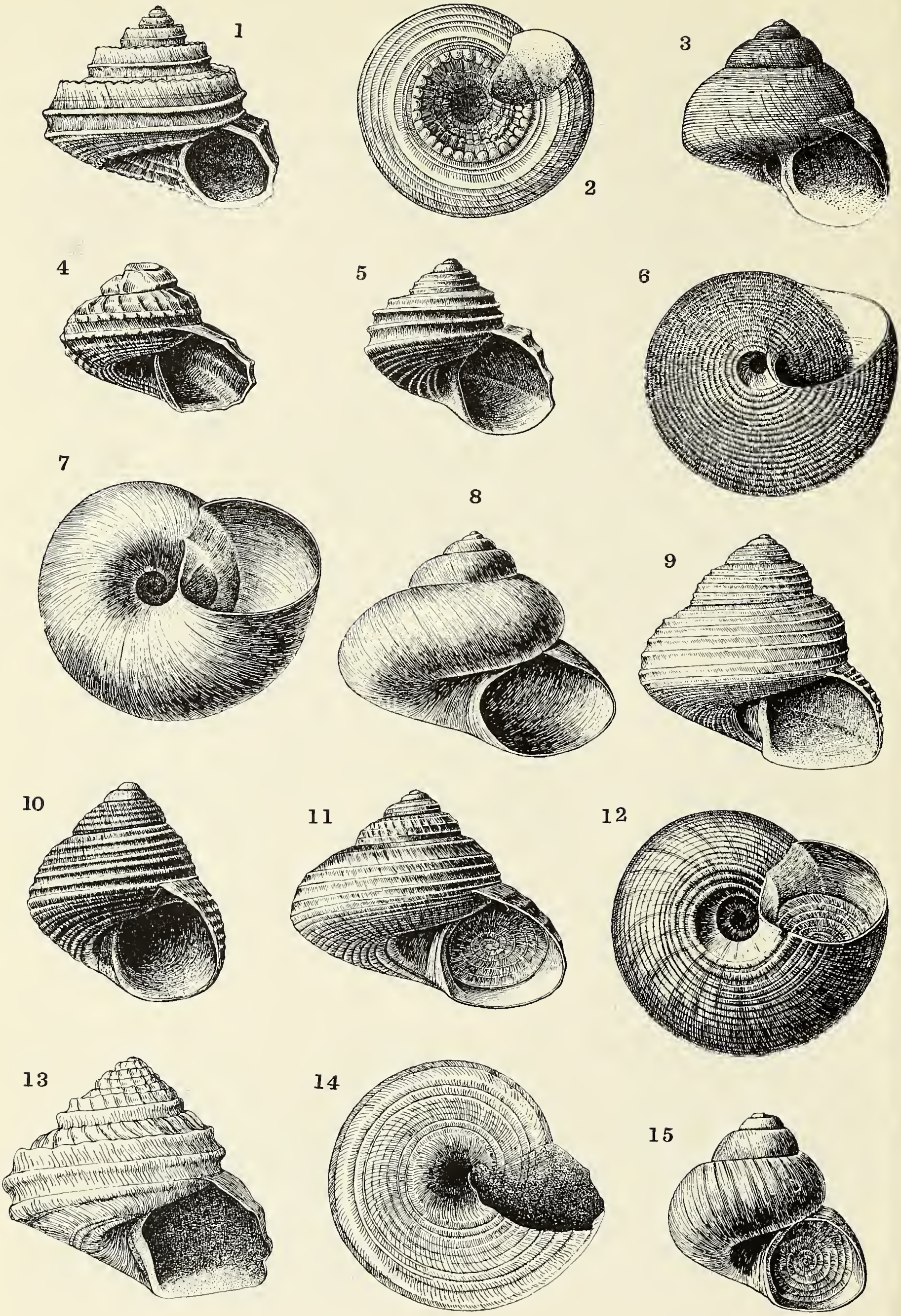


NORTHWEST AMERICAN SHELL-BEARING MOLLUSKS.

FOR EXPLANATION OF PLATE SEE PAGE 217.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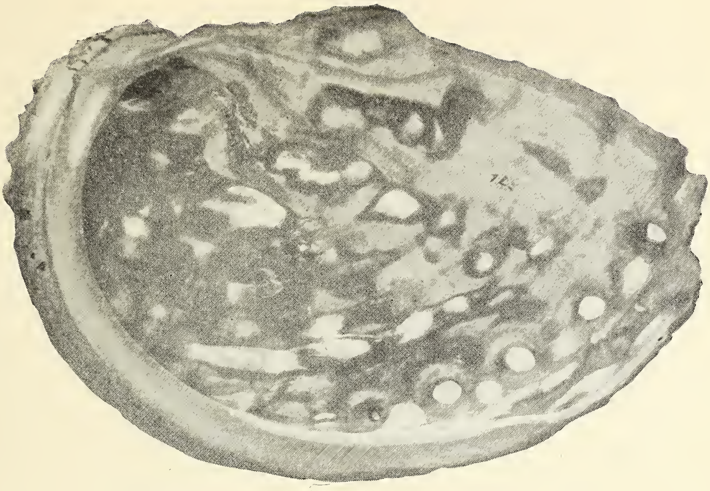
Northwest American Shell-Bearing Mollusks.

For explanation of plate see page 217.



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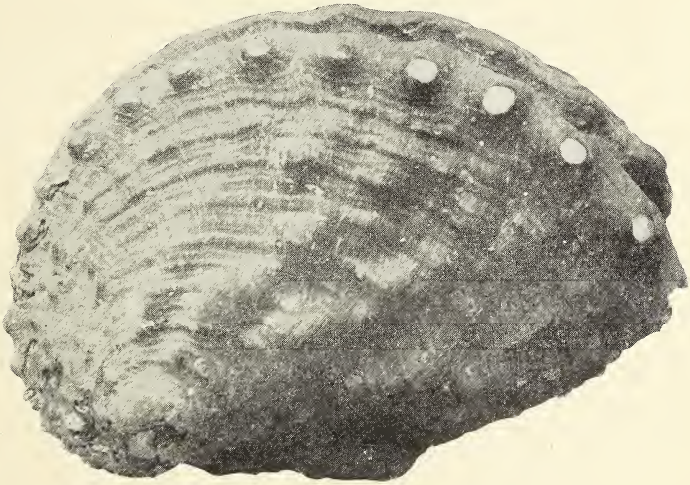

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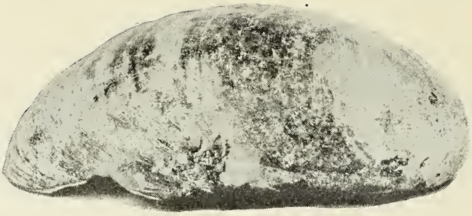
NORTHWEST AMERICAN SHELL-BEARING MOLLUSKS

HALIOTIS KAMCHATKANA JONAS, SEE PAGE 217



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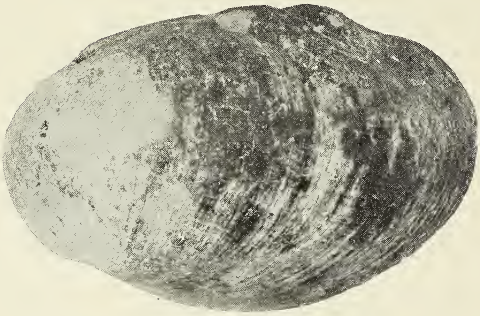

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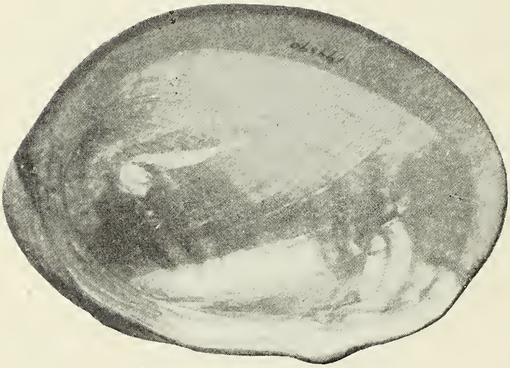

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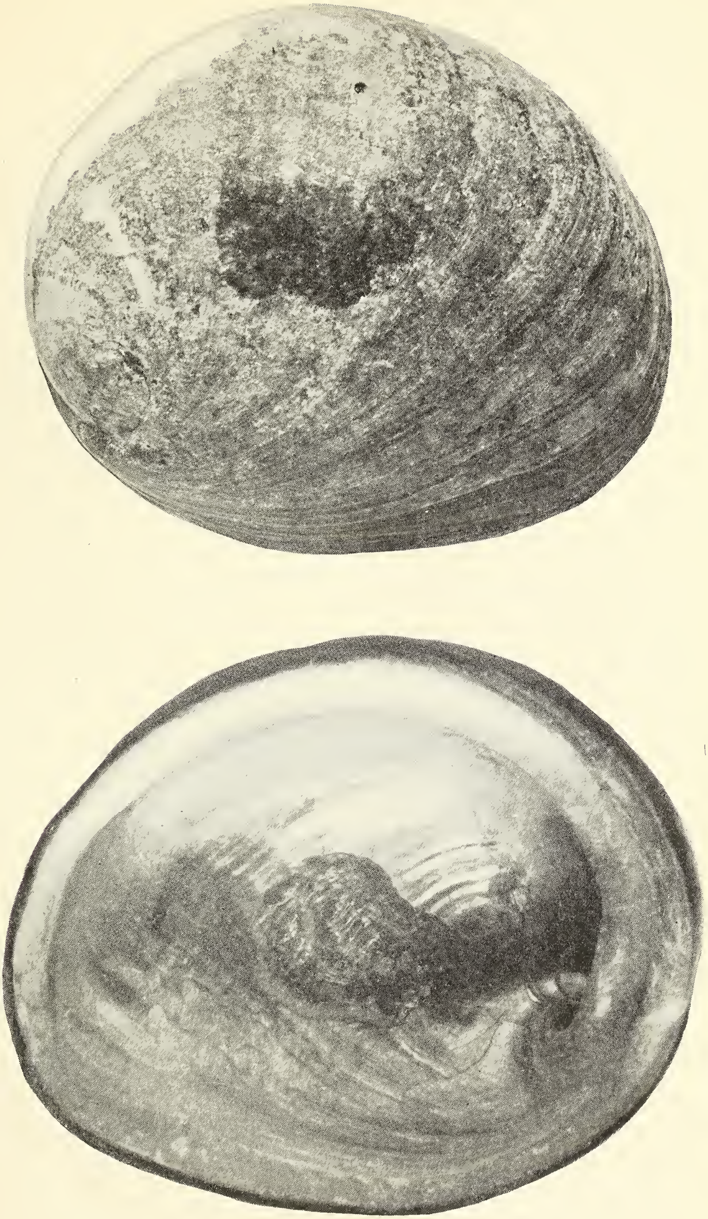
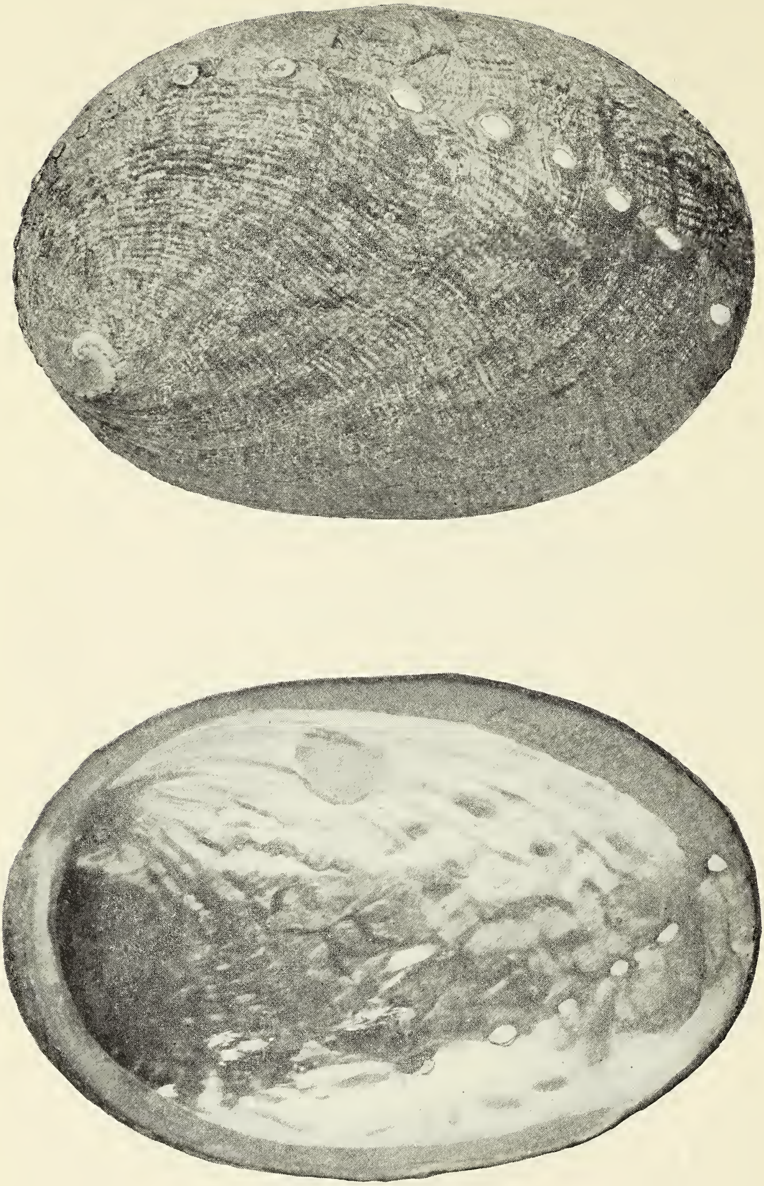
NORTHWEST AMERICAN SHELL-BEARING MOLLUSKS.

HALIOTIS HOLZNERI HEMPHILL, SEE PAGE 217.



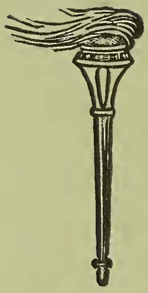
Northwest American Shell-Bearing Mollusks.

Haliotis cracherodii imperforata Dall, see page 217.



Northwest American Shell-Bearing Mollusks.

Haliotis wallalensis Stearns, see page 217.



ADDITIONS AND EMENDATIONS TO UNITED STATES NATIONAL MUSEUM BULLETIN NO. 112.

By William H. Dall,

Honorary Curator of Mollusks, United States National Museum.

With the publication of United States National Museum Bulletin 112 containing a summary of the shell bearing mollusca of the Northwest coast from San Diego northward, with their geographical distribution so far as at that time determined, it was hoped that additional information would be brought out, minor errors corrected, and more light thrown on the whole subject. This has usually been the case when such lists have heretofore been published, and it was expected that the sequel to this one would prove no exception.

This expectation has not been disappointed and a sufficient number of data have accumulated to make desirable a brief supplement to the bulletin in question. Should additional material come in later, a second supplement may be added at some future time. Meanwhile I desire to express my thanks to the correspondents who have kindly furnished information herein presented, and to hope that their useful collaboration may continue indefinitely.

After the entire bulletin was in type and the proof read in November, 1920, and immediate publication expected, a delay was experienced, so that actual publication did not take place until February, 1921. Consequently all names in the bulletin dated " Dall, 1920," should read " Dall, 1921." Other changes follow:

Page 10. *Leda acuta*, add "Also Atlantic."

Page 16. *Barbatia solida*, add " San Pedro, Chace."

Section *Acar*, add: *Barbatia reeveana* Orbigny, Voy. Am. Mér., p. 635, 1846; Conch. Icon., *Arca*, pl. 14. fig. 60, 1844; Balboa, Calif., Dr. Tremper; Mazatlan, Lowe; south to Payta, Peru. *Scapharca multicostata*, add " Balboa, Calif. Dr. Tremper."

Page 17. *Atrina oldroydi*, add " San Onofre, Calif., White."

Page 18. *Ostrea lurida*, for " vol. 12 " read " vol. 13."

After Pectinacea, insert " Family Pectinidae."

No. 2478—Proceedings U. S. National Museum, Vol. 63, Art. 10.
34975—23

ISSUED APR 12 1923

Page 19. *Chlamys fucicolus*, strike out reference to the *Sulphur* voyage and insert "Arnold, Tert, Pectens, Calif., p. 131, pl. 46, fig. 8, 1906."

Page 23. It now appears that *Musculus* was used by Martyn binomially in its ancient significance for *Mytilus* eleven years before Bolten, so we happily can return to the familiar generic name *Modiolaria* for the species of this group.

Page 24. *Crenella decussata*, add "also Atlantic."

Page 25. *Cyathodonta pedroana*, read "Dall, 1915."

Page 30. *Astarte globosa*, read Reeve "vol. 2."

Page 35. *Lucinoma* "*densilineata*," read "*densilirata*."

Page 41. *Pachydesma stultorum*, add "Halfmoon Bay, Weymouth."
Amiantis callosa, add "Santa Monica, Weymouth."

Page 42. *Saxidomus nuttallii*, add "Humboldt Bay, Weymouth."
Chione fluctifraga and *succincta*, add "Mugu Bay, White."

Page 49. *Donax gouldii*, add "San Luis Obispo, Weymouth."
Donax californica, add "Mugu Bay, White."

Page 50. *Sanguinolaria*, add "Mugu Bay, White."

Page 52. *Hemimactra falcata*, add "Newport, Calif."

Page 54. *Cyrtodaria kurriana*, read "1861."

Page 55. Add "*Rocellaria sp*, San Diego, Calif., Orcutt."

Page 56. Under *Xylophaga* add "*Xylophaga californica* Bartsch, 1921; Proc. Biol. Soc. Washington, vol. 34, p. 32, off Point Pinos, Cal., in 78 to 108 fathoms. Also: *Xylophaga washingtonia* Bartsch, 1921, same reference, Departure Bay, B. C., to coast of Washington. Also: under *Teredo*, "*Teredo beachi* Bartsch, 1921, Proc. Biol. Soc. Wash., vol. 34, p. 29; Bull. U. S. Nat. Mus. 122, p. 18, pl. 20, fig. 1, pl. 32, fig. 4, 1922, San Francisco Bay." Add *Teredo* (*Lyrodus*) *townsendi* Bartsch, Bull. U. S. Nat. Mus. 122, p. 26, pl. 22, fig. 2; pl. 33, fig. 2, 1922, Southern San Francisco Bay. Also: to *Teredo* (*Teredops*) *diegensis* add "Bull. U. S. Nat. Mus. 122, p. 29, pl. 22, fig. 3; pl. 34, fig. 3, 1922." The true *Teredo navalis* of Europe is not a resident of the Pacific Ocean.

Page 59. Read *Cymbuliidae*.

Page 60. *Rictaxis punctocoelata*, add "Departure Bay, B. C."

Page 61. *Acteocina culcitella*, add "San Diego, Strong."
Acteocina infrequens, fossil at Santa Monica, living Cape San Lucas to Panama.

Page 62. Above "Genus *Diaphana*" insert "Family Diaphanidae."

Page 66. *Liriola thersites*, second line, *read* "*Ann. Mag.*"

Page 71. *Antiplanes rotula, add* "*smithi* Arnold, not Forbes."

Page 76. *Lora woodiana*, for "strait" read "sea."

Page 86. For "*Merovia*" read "*Cypraeolina* Cerulli-Irelli, 1911."

Page 90. *Beringius kennicottii*, for "Dall, 1907," read "Dall, 1871."

Page 96. *Latisipho nalli*, read "*Latisipho halli*."

Page 103. Under *Columbella*, insert "*Columbella fuscata* Sowerby, 1832, Proc. Zool. Soc., p. 117; Thes. Conch., *Columbella*, p. 114, pl. 36, figs. 21, 25, 1847. La Jolla, Calif. (Orcutt) to Ecuador."

Page 111. Under *Thais* insert "*Thais biserialis* Blainville, 1832; Nouv. Ann. du Mus. de Paris, p. 50, pl. 11, fig. 11, La Jolla (Orcutt) to Peru."
Neptunea tenuisculpta, add "Bull. Am. Pal. VIII, No. 36, p. 5, pl. 1, fig. 6-9, 1921."

Page 113. *Pseudomurex costata* read "p. 231."

Page 114. *Opalia evicta*, vol. 44, read "vol. 64."

Page 117. For *Janthina exigua*, etc. read "*Janthina bifida* Nuttall, Jay Cat., p. 68, 1839; Conch. Icon., *Janthina*, fig. 25^b, Dec., 1858."

Page 121. *Chemnitzia engbergi*, add "p. 570." Under *Strioturbonilla* add, "*Strioturbonilla kincaidi* Bartsch, 1921, Proc. Biol. Soc. Wash., vol. 34, p. 33, Mar. 31, 1921; Dogfish Bay, Puget Sound."

Page 128. Under *Chrysallida* add, "*Chrysallida cumshewaënsis* Bartsch, 1921; Proc. Biol. Soc. Wash., vol. 34, p. 34; Cumshewa Inlet, B. C."

Page 136. *Amaura engbergi* and *sanjuanensis*, add "p. 570."

Page 137. *Amaura washingtonia*, add "p. 571."

Page 142. For *Triforidae* read "*Triphoridae*," and for *Trifora* read "*Triphora*" throughout. Under *Cerithiopsis* insert "*Cerithiopsis fraseri* Bartsch, 1921; Proc. Biol. Soc. Wash., vol. 34, p. 34. Clayoquot, B. C., to Victoria, B. C." Also: "*Cerithiopsis onealensis* Bartsch, 1921; same reference, p. 35; Oneal Island, Puget Sound."

Page 144. Above "Incertae sedis" insert "Section *Cerithiopsina* Bartsch, 1911," and add "*Cerithiopsis signa* Bartsch, 1921, Proc. Biol. Soc. Wash., vol. 34, p. 36; Oneal Island, Puget Sound." Also: "*Cerithiopsis willetti* Bartsch, 1921, same reference; Forrester Island (Willett) to Puget Sound."

Page 145. *Fenella* A. Adams, 1860, not Westwood 1840=*Alabina* Dall, 1902.

Page 148. For *Trichotropis costellata* substitute "*Trichotropis borealis* Sowerby, 1829, Zool. Journ, vol. 4, p. 375."

Page 149. *Caecum dalli*, *licalum*, *diegense*, *grippi*, and *Micranellum pedroense*, add "p. 568."

Page 150. For all species of *Micranellum* add "p. 569." For *Fartulum hemphilli*, *occidentale*, and *bakeri*, add "p. 566." For *Elephantulum carpenteri* add "p. 567."

Page 151. *Petaloconchus montereyensis*. Add "Catalina Island."

Page 152. *Littorina*, add "Blainville, 1828." For section *Littorina* s. s. read "*Neritoides* Brown, 1827."

Page 153. *Littorina sitchana*, read "*Littorina sitkana*," and correct "Litorina to "*Littorina*." For section *Algaroda*, read "*Littorina* s. s."

Page 156. *Alaba catalinensis*, add "p. 572." *Diala marmorea* may prove to be a *Barleeia*.

Page 158. Under *Alvania* insert "*Alvania burrardensis* Bartsch, 1921, Proc. Biol. Soc. Wash., vol. 34, p. 38, Burrard Inlet, B. C.

Page 159. *Alvania sanjuanensis*. Read "Bartsch, 1921, Proc. Biol. Soc. Wash., vol. 34, p. 37."

Page 160. *Truncatella californica*. After "San Martin Island" read "Lower California."

Page 163. Under *Crucibulum*, insert "*Crucibulum imbricatum* Sowerby. Genera, *Calyptraea* fig. 5; Broderip, Trans. Zool. Soc. London, vol. 1, p. 193, pl. 27, fig. 7, 1834. La Jolla, Cal. (Orcutt) to Peru."

Page 174. *Chlorostoma gallina umbilicatum*, add "Catalina Island."

Page 177. *Cidarina*, read "Dall, 1909." *Cidarina cidaris*, read "Proc. U. S. Nat. Mus., vol. 15, pl. 22, fig. 4." For *Solaricida* read "*Calliotropis* Seguenza, 1903." The former dates from 1919.

Page 181. Under *Vitrinella* add "*Vitrinella columbiana* Bartsch, 1921; Proc. Biol. Soc. Wash., vol. 34, p. 39. Departure Bay, British Columbia."

Page 182. *Cyclostremella concordia*, add "p. 572."

Page 183. *Schismope coronata*, Bartsch regards this as a new species which he calls *S. californica*. He also refers *S. caliana* to *Adeorbis*.

Page 192. *Ischnochiton serratus* dates from 1864.
Ischnochiton berryi, read "vol. 55."
Ischnochiton mertensii, add "San Martin Island, Lower California."

Page 193. *Pallochiton*, read "1879."

Page 194. *Callistochiton crassicostatus*. Add "San Martin Island, Lower California."

Page 196. *Placiphorella velata*. Add "Sooke Harbor, Vancouver Island, Macoun."

Page 197. *Placiphorella pacifica*, read "Kasaän Bay."
For *Katherina* read "*Katharina*."
Genus *Cryptochiton*, for Gray read "Middendorff."

Page 210. Belcher, Last of the Arctic Voyages, read "vol. 2."

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